



Reshaping our world with Software

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What are the challenges that will occupy us for the next 100 years?

**How will we manage
unprecedented urbanization?**





**How do we reduce waste
and inefficiency?**

How do we make use of the many new sources of data available?



We are working on . . .

Making cities Intelligent

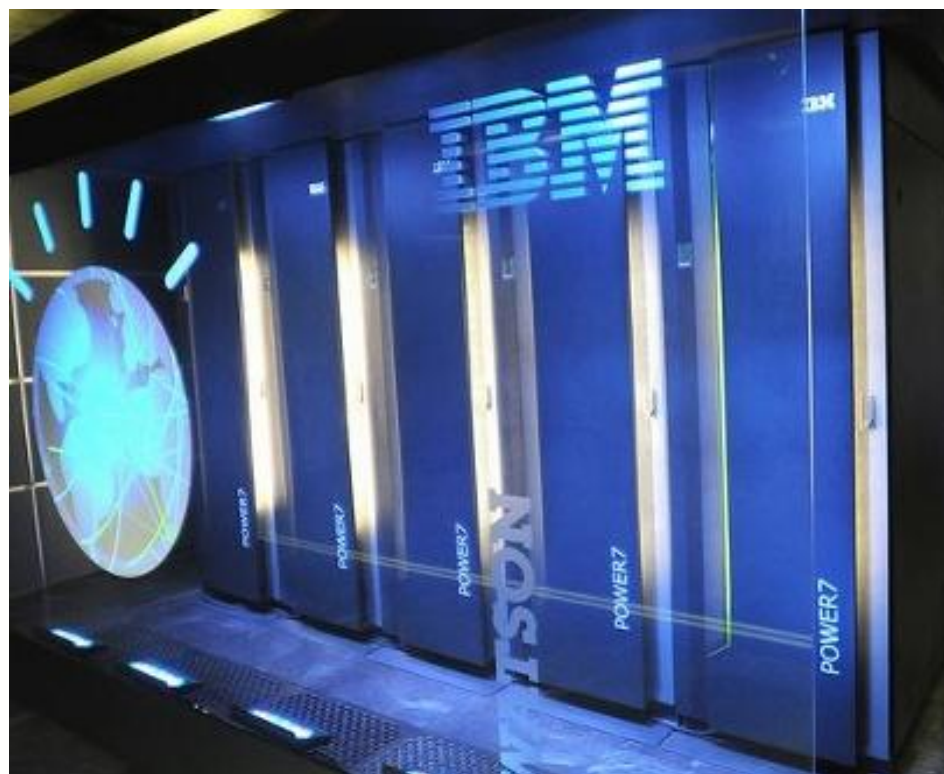
Creating opportunities from today's harsh realities



We are working on . . .

Redefining Analytics and Big Data

Watson-like capabilities can now be applied to business:



Manage massive amounts of data from business operations and an instrumented world

Deal with structured and unstructured data to gain meaningful insight into business

Have a high level of confidence in analytics to make key business decisions

Do it at the speed of business, in real time

We are working on . . .

Helping Businesses go Social!



A “Social Business” is...

- Engaged
- Transparent
- Nimble

We are working on . . .

Securing the digital world



Threats affect every enterprise, every industry, every region

Business results

Sony estimates potential \$1B long term impact – \$171M / 100 customers

Brand image

HSBC data breach discloses 24K private banking customers

Supply chain

Epsilon breach impacts 100 national brands

Legal exposure

TJX estimates \$150M class action settlement in release of credit / debit card info

Impact of hacktivism

Lulzsec 50-day hack-at-will spree impacts Nintendo, CIA, PBS, UK NHS, UK SOCA, Sony ...

Audit risk

Zurich Insurance fined \$3.8M for the loss and exposure of 46K customer records

Can this happen to us?

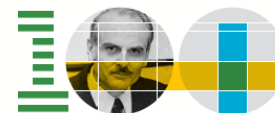
At IBM we have been transforming software development for over 100 years now!



Punched Card



RISC: Reinventing Computing



Relational Database



Magnetic Tape Storage



Fortran



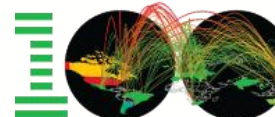
Deep Blue



Breaking the Petaflop Barrier



Barcode



The Rise of the Internet

Reshaping industries starts with software

Software innovation is becoming synonymous with business innovation



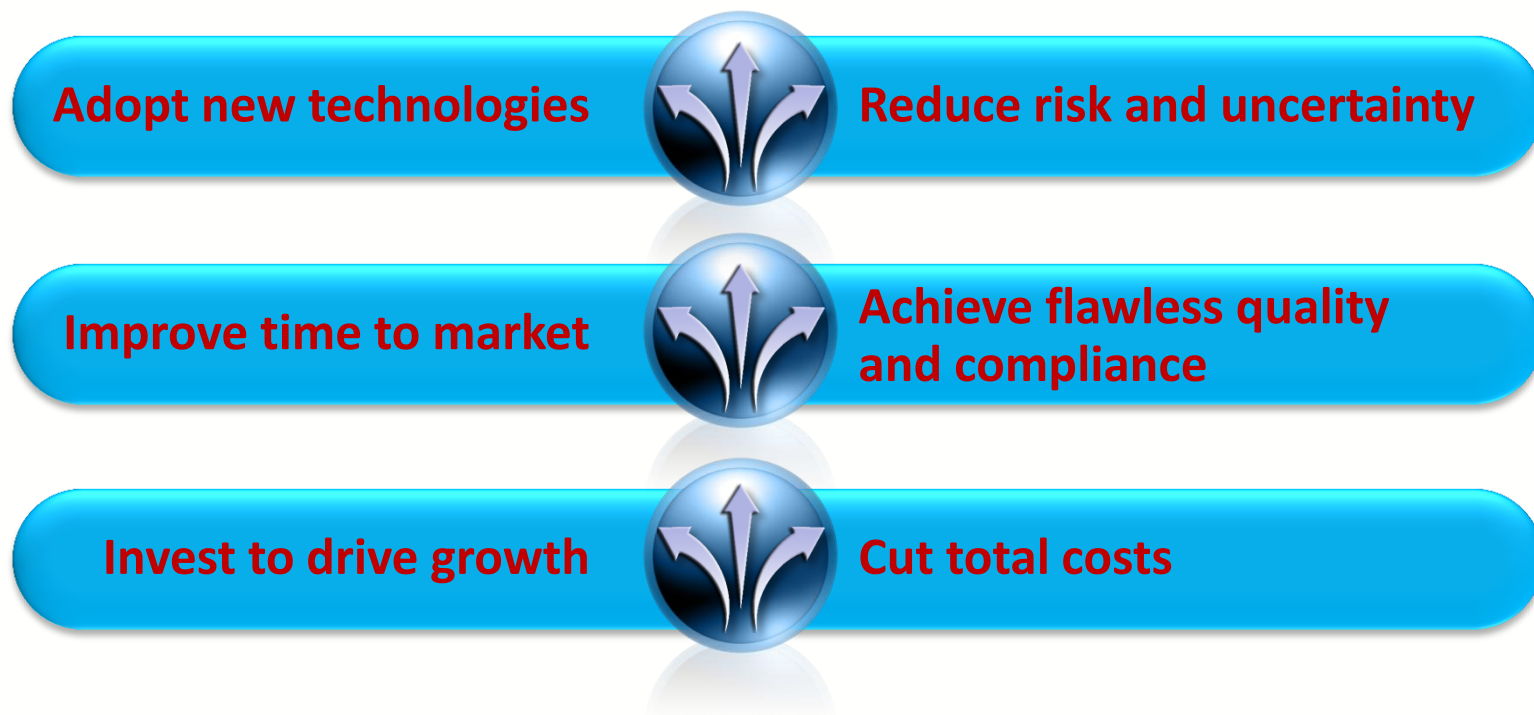
Software-driven Mobile Banking

- Most widely used banking channel by 2020, if not sooner

New Surgical Robotic System

- Powered by 1.4 million lines of code
- 3-6 weeks mitral valve procedure recoveries compared to 3-6 months
- Less invasive, breastbone stays intact

Transformation of software development and delivery is at the core of this change



We are working on . . .

Enabling Progress, Changing Lives

Inadequate infrastructure

400 million Indians have no access to electricity

46% of Indian adults have no banking facilities



Outdated processes

40 billion annual loss

due to supply chain inefficiency

Wasted Resources

17+m tonnes of foodgrains wasted annually

27-30% transmission loss across energy grids – one of the highest in the world



Smarter Planet is a reality in India too...but we have a long way to go..



Customized Banking

India's largest Public Sector Bank: Better understanding the needs of, manage accounts, and create products for its millions of customers.



Improved Transportation

An International Airport in India: Gain a single, clear picture of all aspects of airport operations and provide better customer service.



Efficient Governance

KVTSDC: Provide targeted job and training opportunities to a population with limited access to the Internet.

Smarter Railways

Indian Railways: World's largest railway gets an automated crew management solution.



Smarter Infrastructure

An Electric Supply Company in India: Power supply monitoring and asset management to light up India's busiest city.



Quality Healthcare

Star Health & Allied Insurance: Managing a complete health insurance process for millions of India's citizens in real time.





What can we do together?