# IBM Research & Development Lab Boeblingen

The IBM Centennial 2011: 100 years IBM

Our history, present and future are based on three ideas:

- **Pioneering IT**
  How to capture the opportunity of enterprise computing

- **Making The World Work Better**
  How to apply technology to transform companies, industries, societies

- **Reinventing The Modern Corporation**
  How to build a new kind of organization and sustain it over time

THINK

IBM – Innovation for a century

**Foundation of
Computing Tabulating and
Recording Comp.**

(1911)

Renaming into

International Business Machines

(1924)

IBM Logo as of 1956

IBM Logo since 1972

The IBM Centennial Logo

The first hard disk drive (1956)

e-Business (1997)

Learning Systems (2011)

**Smarter Planet
(2008)**

The first printer (1920)

Scanning Tunneling Microscope (1981)

**System/360
(1964)**

IBM paves Linux the way

into the enterprises

(2000)

**PC
(1981)**

Punch cards (1928)

**BlueGene
Supercomputer (2004)**

DRAM (1966)

**Deep Blue
(1997)**

**Watson
(2011)**

What are the upcoming challenges?

How will we manage unprecedented urbanization?

How do we make the most of what we have?
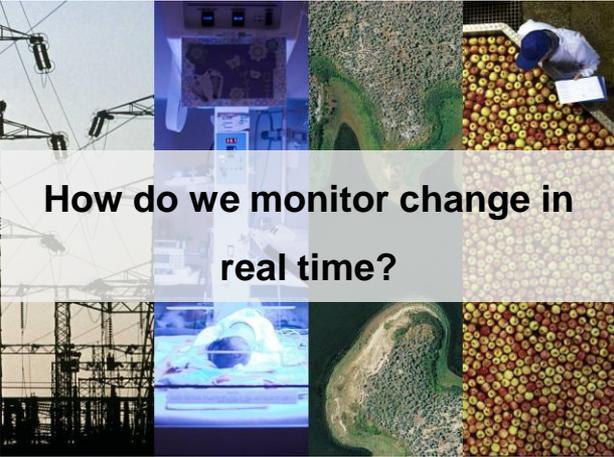
How do we monitor change in real time?

How will people come together to create value?

How will modeling the future change the way we make decisions?

How do we foresee the consequences of our actions?

IBM Research & Development – A Globally Integrated Team

🔵 IBM Research Lab

🟢 IBM Development Lab

- **More than 60.000 Developers, 3.000 Researchers**
- **More than 80 Labs**
- **More than 70 Acquisitions since the year 2001**

- **About 6 Billion US $ investment in R&D (2009)**
- **Developing the largest IT product portfolio in the world**
- **4900 US Patents in 2009 (#1 since 17 years)**

IBM Germany Research & Development GmbH

- Largest IBM Development Lab in Europe
- Ca. 1800 Employees
- Founded 1953
- Sites: Boeblingen (HQ), Mainz, Kassel
- Managing Director: Dirk Wittkopp

Hardware → Firmware → Operating System → Software → Services

- Systems and Software Development
- Cloud Service Development
- Lab Services
- Client Center
- Sales and Partner Support
- Academic Relationships

IBM Research & Development – Projects in the Germany Lab

Solutions

Financial Messaging | Collaboration | Smart Grid | Healthcare Solutions | RFID Solutions | Telematics | Smarter Home | Smarter Cities | Store Integration

Banking & Financial Markets | **Communications** | **Electronics, Automotive & Aerospace** | **Energy & Utilities** | **Government** | **Healthcare** | **Retail** | **Insurance** | **Travel & Transportation** | **Oil & Gas**

Software

Enterprise Content Management, Data Warehouse, SAP Enablement | Process Server | Enterprise Portal | System Automation, Service Automation, Storage Management | Internet Security Solutions

Turning Information into Insights | **Drive Business Integration and Optimization** | **Connect and Collaborate** | **Enable Product and Service Innovation** | **Optimize the impact of business infrastructures and services** | **Manage Risk, Security, and Compliance**

Systems

System z, p & x, Linux, zOS, Systems Software | Storage Solutions | CPUs | SmartCloud Enterprise Cloudburst

Servers | **Storage** | **Network** | **Technology** | **Cloud Infrastructure**

Research

High-Performance Systems

Materials Science | **Chemistry** | **Mathematical Science** | **Physics, NanoTechnology** | **Computer Science** | **Electrical Engineering** | **Behavioral Science** | **Service Science**
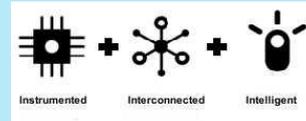
Business & Management
Science & Engineering
Social & Cognitive Sciences
Economics & Markets

Today's Key Innovation Themes

Solutions

- Smarter Planet
- Cloud SaaS

People

- Social Networks
- Collaboration
- Web Experience
- Mobile Computing

Process

- SOA
- BPM

Information

- Analytics
- Optimization

Infrastructure

- Workload-Optimized Systems,
- Cloud IaaS

Today's Key Innovation Themes

Solutions

- Smarter Planet
- Cloud SaaS

Instrumented   Interconnected   Intelligent

- **Consumerization of Business IT**
- **Devices drive innovation**

- **Massive use of sensors and mobiles enabling new applications**
- **Deeper integration of Embedded and Business Systems**

People

- Social Networks
- Collaboration
- Web Experience
- Mobile Computing

Process

- SOA
- BPM

IBM Software

Business Agility

Information

- Analytics
- Optimization

Infrastructure

- Workload-Optimized Systems,
- Cloud IaaS

- **Appliances, Accelerators**
- **Multi-Architecture Systems**
- **Cloud-Services orchestration**
- **Hybrid Cloud Mgmt**

- **Integration of multiple disparate datasets**
- **Leveraging historical data**
- **Analyze in Real-Time**
- **Model, Predict & Act**

What's Next?

Solutions

- Smarter Planet
- Cloud SaaS

Instrumented Interconnected Intelligent
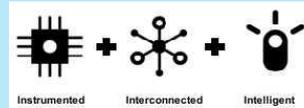
Semantics

BIG Data

Natural Interfaces

People

- Social Networks
- Collaboration
- Web Experience
- Mobile Computing

Process

- SOA
- BPM

Information

- Analytics
- Optimization

Better Integration of human cognition and computing

Infrastructure

- Workload-Optimized Systems,
- Cloud IaaS

Computing Everywhere and in Everything

MUCH Faster
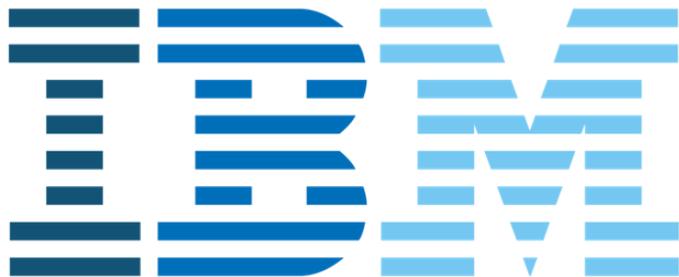
Dirk Wittkopp

Vice President
IBM Germany Research & Development GmbH

wittkopp@de.ibm.com