Industry Differentiation

Dr. John E. Kelly III
Senior Vice President,
Cognitive Solutions and IBM Research

Mark Foster
Senior Vice President,
Global Business Services
Our clients and partners are scaling
IBM Watson Health
Scaling Watson Health

Deborah DiSanzo
General Manager,
IBM Watson Health
IBM's Platforms: Healthcare

Industry and Domain Specialization
- Healthcare
- Financial Services
- IoT

Integrated Solutions
- Analytics
- Security
- Customer Engagement
- Global Ecosystem

Services

Hybrid Software and Systems

Data
(Public, Private, Partner)
Watson Health: Leveraging the Platform

- Oncology & Genomics
- Government
- Life Sciences
- Value-Based Care
- Imaging

- 100M+ patient records
- 30B+ images managed
- 5M+ genomic alterations
- 200M+ lives
- 2B+ social determinant data points
- 4M+ drug patents
- 40M+ research documents

- Patient Similarity
- Deep Learning
- Sequence Learning
- Natural Language Processing
- Domain-specific Annotation/Curation

- HIPAA enabled
- GxP enabled
- Purpose-built for health data
- End-to-end security
- Within a QMS
Creating Innovative Cognitive Solutions with Global Partners

Watson Imaging Clinical Review
Sugar.IQ with Watson
Watson Care Manager
Watson for Clinical Trial Matching

Watson for Drug Discovery
Watson Genomics from Quest Diagnostics
Watson for Drug Discovery
Population Health Management
Watson Health Medical Imaging Collaborative

MAYO CLINIC
American Diabetes Association
Teva
Quest Diagnostics
Siemens Healthineers
Memorial Sloan Kettering Cancer Center
Pfizer
Watson for Oncology

Watson for Patient Safety
EDMTRONIC
Sugar.IQ with Watson
Turning Point Gen 2.1

BROAD INSTITUTE
Bumrungrad International Hospital
Alder Hey Children’s NHS Foundation Trust
Froedtert & Medical College of Wisconsin
Best Doctors

* Available March 2017
** Availability TBD

Partial list of offerings, clients and partners
A Disruption Is Underway in Life Sciences

**Drug Discovery**
- IBM Clinical Development
- Real-World Evidence*
- Watson for Drug Discovery

**Pharmacovigilance (Patient Safety)**
- Watson for Patient Safety*

**$2.6 billion**
average cost to develop one new drug\(^1\)

**$8 million**
estimated cost per day when a clinical trial is delayed\(^2\)

**$6.1 billion**
will be spent on drug safety by 2020, with **1.5 million** preventable adverse drug reactions annually.\(^4\)

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*Planned offering
Mark J. Alles
CEO, Celgene Corporation

CHANGING THE COURSE OF HUMAN HEALTH THROUGH BOLD PURSUITS IN SCIENCE

Watson for Patient Safety*
Cloud-based, SaaS offering to collect, assess, monitor, and report adverse drug reactions.

*Planned offering
Slide provided by Celgene
A Disruption Is Underway in Value-Based Care

50% of Medicare payments to alternative payment models by 2018

20% of the US population over 65 by 2030

$47 trillion cumulative estimated global economic impact of chronic disease between 2011 and 2030

$9,990/person In 2015, U.S. healthcare spending increased 5.8 percent to reach $3.2 trillion, or $9,990 per person

1. CMS, 2. Health Leaders Media, 3. CMS, 4. CMS
With analytics, cognitive insights, and lean transformation we can help change behavior, reduce variation and improve decision-making.
The Central New York Care Collaborative is a lead agency implementing New York State’s Delivery System Reform Incentive Payment (DSRIP) program that connects more than 2,000 healthcare and community based service providers across Central New York with a focus on:

- Movement to Value-Based Care delivery mode to improve the outcomes of care
- Cost reduction which includes decreasing avoidable hospital readmissions and emergency department use by 25% by 2020
- Building connections between provider organizations in a seamless system that is patient-centered

“Working Together for Better Health”
CNYCC at a Glance

- **200,000**: Medicaid Beneficiaries
- **6,000**: Square Miles
- **6**: Counties
  - Cayuga, Lewis, Madison, Oneida, Onondaga, & Oswego
- **2,000**: Health, Behavioral Health and Community-based Service Providers
- **170**: Partner Organizations

Slide provided by CNYCC
The Key to System Transformation - Managing the Health of the Population Using Data and Analytics

CNYCC in partnership with IBM Watson Health will create a seamless system to integrate data from a variety of care settings—primary care, post-acute care, behavioral health, community and acute care—and more than 75 electronic health record systems, health information exchanges, and other data sources to help the aging, vulnerable population of the region.
Financial Services

Blockchain

Bridget van Kralingen
Senior Vice President,
Industry Platforms
IBM's Platforms: Financial Services

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Financial Services Industry Platform

Expanding IBM from trusted systems to trusted industry-led cognitive processes, starting in Financial Services

Incremental market opportunity of $900B in Financial Services

Distinctive Industry Platform Capabilities

Cognitive Processes…

- Cognitive Process Flows
- Blockchain
- Robotic Process Automation
- Business Process SW & Outsourcing

with Watson Platform & Analytics…

- Cognitive Analytics
- Curated Data
- Industry Data Models
- Real-Time Big Data

on secure, scalable Infrastructure

- Most trusted transactional systems
- Machine Learning
- Cognitive CyberSecurity
- Cloud built for individual industries

Three Markets

Process Clouds

Industry SaaS

FinTech & Developer Marketplace
Opportunity

300M
pages regulation by 2020

$100B
annual spend
addressing compliance

$250B
in sanctions & fines

80%
processes are manual and depend on human expertise

IBM Differentiation

97 out of the top 100 worldwide banks use System z\(^1\)

600 regulatory experts and trusted BPO capability

Processes optimized through cognitive technology and trained by Promontory

35,000 GBS analytics, business process & digital transformation consultants

Initial Focus: Risk & Compliance

Watson Financial Services leads with RegTech as most manual and operationally challenging client need

Opportunity

Regulatory Change Management

Conduct Surveillance

Know Your Customer

Anti-Money Laundering

\(^1\) Source: IBM press release: “THE IBM zENTERPRISE 2013 FACT SHEET”
Louis Rauchenerger
Global Director of Regulatory Relations, JPMC
IBM's Platforms: Blockchain

- Blockchain
- IBM High Security Business Network on Cloud
- Watson on IBM Cloud

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- Data (Public, Private, Partner)
IBM Blockchain
Create and run enterprise-grade networks through smart business processes enabled with security in mind

Opportunity

$200B
Estimated cost of counterfeit drugs sold globally

90%
Banks piloting blockchain projects

1/3
of all food produced globally is wasted

$200B+
potential value for FS & supply chain alone

40%
of profit share for market leaders in industries with network effects

IBM Differentiation

8
Live networks today

400+
Clients engaged on blockchain

Hyperledger Fabric is the fastest and most manageable fabric with 2,000 Transactions/second

High levels of Security & largest Cryptography group

Leading the industry in live business networks

Supply Chain
Provenance
Private Equity
Capital Markets

with a trusted process platform for enterprises & developers

IBM Blockchain has 50+ Developer APIs
Creating & managing networks, digital assets and participants

Hyperledger v1.0 Open for Business
122 Members | 36,800 Downloads | 5,500 developers

on a scalable low latency infrastructure

IBM High Security Business Network on Cloud
(power by LinuxONE Mainframe)
Breadth of Blockchain Ecosystem

400 Blockchain Clients

122 Hyperledger Members
David Puth
Chief Executive Officer, CLS
The Evolution of CLS and IBM Relationship

**Market**
- Herstatt Risk Mitigation Agreed by Key World Banks

**CLS**
- Conception of service begins
- CLS and IBM initiate system development
- CLS launched with 7 currencies
  - 8 currencies added
- Global financial crisis
  - 2 currencies added
  - Designated as a systemically important Financial Market Utility
- 10 year IBM/CLS contract signed to run FX service
- Introduced Americas Same-Day Settlement
- Partnership extended for 10-years
- Introduced compression and cross currency swap settlement services
- 1 currency added

**IBM**
- Partnership extended until 2025
- Linux Foundation's Hyperledger Project announced
- Announced intent to launch a payment netting service using Hyperledger fabric
IBM's Platforms: Security

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Blazing a new path in enterprise security

IBM Security:
- Security Analytics
- Integrated Platform
- Services Expertise

~$100B, 8% CAGR
2020 Market Opportunity

IBM:
- $2B+ revenues
- 8K employees
- 12K customers
- 13% growth at 2x the market
- #1 enterprise security vendor
IBM Security

Security Transformation Services

Security Operations and Response

Information Risk and Protection

Security Ecosystem

Endpoint

Cloud

Network

Advanced Fraud

Mobile

Data and Apps

Identity and Access

Threat Intelligence

Security Analytics and Orchestration

Cloud

Information Overload
200K+ security events per day, 20-40 events per analyst

Skills Gap
1.5M unfilled security jobs by 2020

Wasted Time
21K+ hours and $1.3M wasted chasing false positives

Time Is Money: Breaches contained in 30 days cost $1M less
Speed
Investigates 60x faster than complex manual analysis

Accuracy
Adds 10x more actionable indicators to uncover new threats

Intelligence
Draws from 1M+ security documents
Transforming with cognitive
Transforming with cognitive

QRadar Advisor with Watson
Transforming with cognitive

Cognitive Endpoint Detection

QRadar Advisor with Watson
Transforming with cognitive

Cognitive Mobile Intelligence

QRadar Advisor with Watson
Transforming with cognitive

Cognitive Data and App Vulnerabilities Detection

QRadar Advisor with Watson
Transforming with cognitive