Generating Higher Value at IBM

IBM is an innovation company. We pursue continuous transformation both in what we do and how we do it—always remixing to higher value in our offerings and skills, in our operations and management practices, and in the transformational capabilities we deliver to our clients.
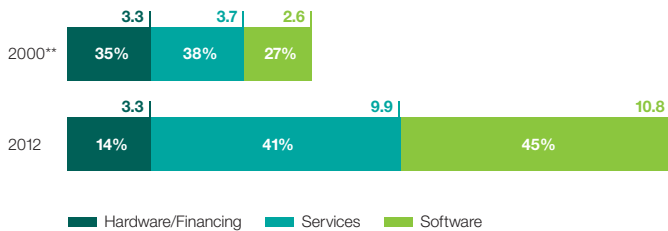
IBM

2015 Road Map

Each year IBM describes how the company manages its business and serves its shareholders in a detailed financial road map.

A long-term perspective ensures IBM is well positioned to take advantage of major shifts occurring in technology, business and the global economy.

1. We continuously change our business mix toward higher-value, more profitable technologies and market opportunities.

Segment Pre-tax Income*
($ in billions)

	3.3	3.7	2.6		
2000**	35%	38%	27%		

	3.3		9.9		10.8
2012	14%	41%		45%	

■ Hardware/Financing   ■ Services   ■ Software

* Sum of external segment pre-tax income not equal to IBM pre-tax income.

** Excludes Enterprise Investments and not restated for stock-based compensation. 2000 Segment PTI is reclassified to conform with 2012 presentation.

About 50% of IBM segment profit expected to come from Software by 2015.

2. We have become a globally integrated enterprise to capture new growth and productivity.

Growth Markets Share of Geographic Revenue

2012

24%

22%	2011
21%	2010
19%	2009
11%	2000*

* Excluding divested businesses of PCs and printers.

IBM operations in more than 170 countries leverage the company's global scale and expertise.

A globally integrated model allows us to focus resources on client-oriented work and enables rapid deployment of IBM capabilities to growth markets. In 2012, we continued our rapid geographic expansion—opening 144 branch offices. Our growth markets delivered more than 60 percent of our geographic gross profit growth between 2010 and 2012.

Global integration of all our major enterprise functions—from service delivery to marketing—has enabled IBM to deliver enterprise productivity savings while improving quality.

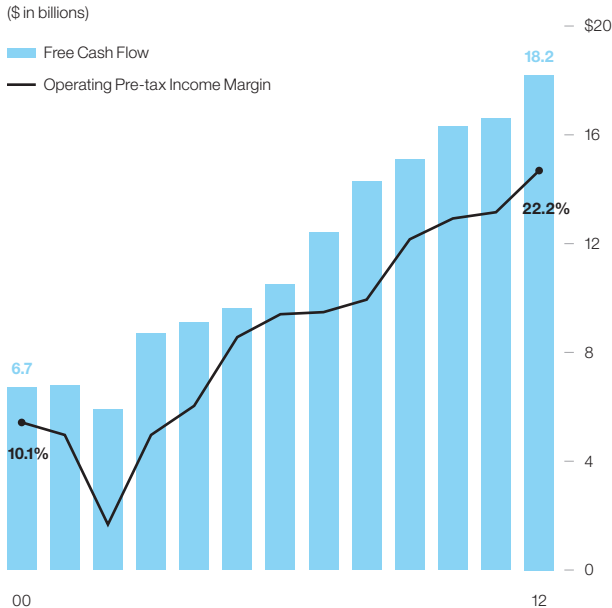**Approaching 30%** of geographic revenue from growth markets by 2015.

3. By aligning our business model with our clients' needs, we achieve our financial goals.

Our operating (non-GAAP) pre-tax income margin in 2012 was 22.2 percent, 12 points higher than in 2000. The primary driver of this performance was gross profit margin expansion, as a result of the shift in our business mix to more profitable, higher-value segments and improved productivity.

At the same time, we've increased R&D investment. Since the beginning of 2000, we've spent $75 billion in R&D, enabling us to deliver key innovations and maintain U.S. patent leadership for our 20th consecutive year in 2012.

Our solid business model performance has resulted in consistently strong free cash flow. In 2012 our free cash flow was $18.2 billion, $12 billion higher than a decade ago.
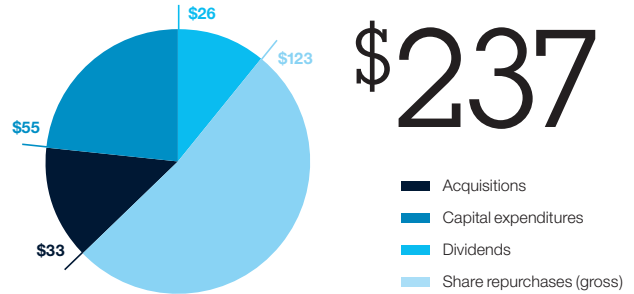
Free Cash Flow and Operating Pre-tax Income Margin*
($ in billions)

* Excludes acquisition-related and nonoperating retirement-related charges.

4. This allows us to invest in future sources of growth and provide strong returns to our shareholders.

Primary Uses of Cash Since the Beginning of 2000
($ in billions)

$237

- Acquisitions
- Capital expenditures
- Dividends
- Share repurchases (gross)

Acquisitions: Since the beginning of 2000, we have acquired more than 140 companies in strategic areas including analytics, cloud, security and Smarter Commerce. We expect to spend $20 billion in acquisitions over the 2015 Road Map period to support growth initiatives.

Capital Expenditures: We have invested more than $55 billion since 2000 to advance our capabilities.

Share Repurchase and Dividends: Since 2000, we have returned almost $150 billion to shareholders—paying $26 billion in dividends and reducing the outstanding share count by over 35 percent. We expect to return $70 billion to shareholders in our 2015 Road Map period—$50 billion through gross share repurchases and $20 billion in dividends.

$70 billion expected to be returned to shareholders through 2015.

5. This delivers long-term value and performance for all key IBM stakeholders — investors, clients, employees and society.

Our 2015 Road Map continues the drive to higher value — with the expectation of at least $20 operating (non-GAAP) EPS in 2015.

Key 2015 Road Map Objectives:

- Software becomes about half of segment profit
- Growth markets approach 30 percent of geographic revenue
- Generate $8 billion in productivity through enterprise transformation
- Return $70 billion to shareholders
- Invest $20 billion in acquisitions

Key Drivers for 2015 Road Map

Revenue Growth
A combination of base revenue growth, a shift to faster growing businesses and strategic acquisitions.

Operating Leverage
A shift to higher-margin businesses and enterprise productivity derived from global integration and process efficiencies.
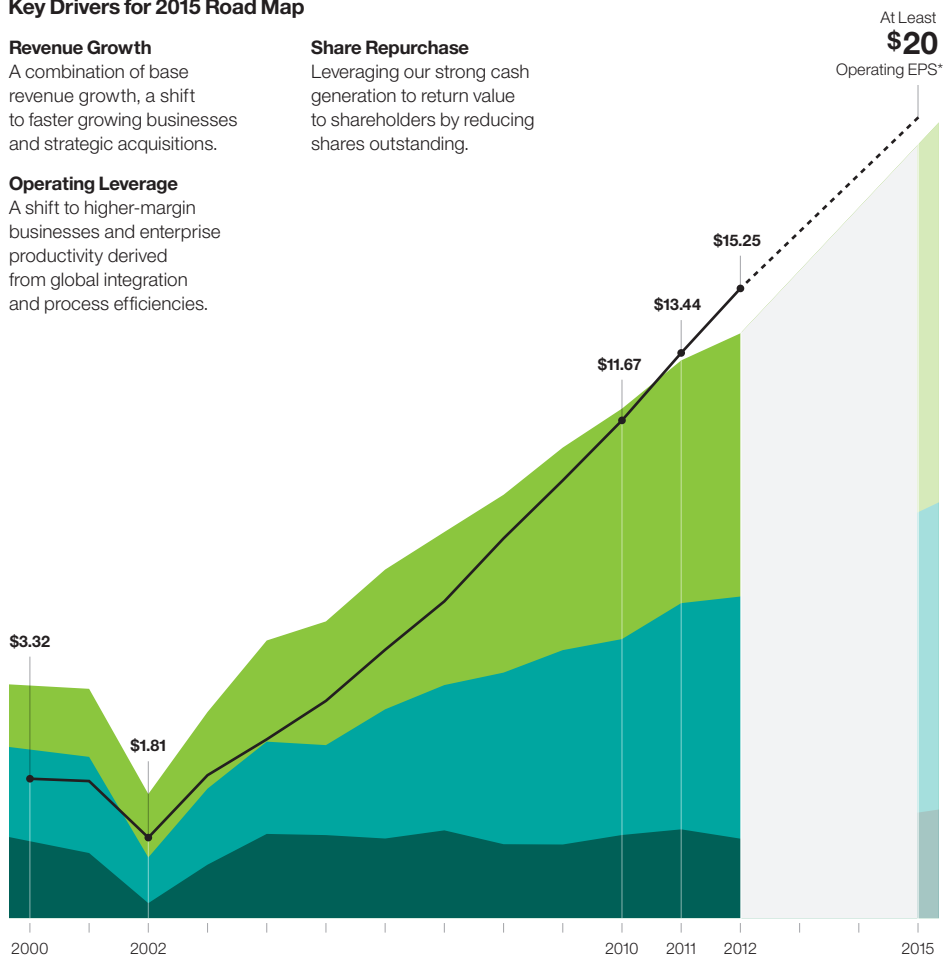
Share Repurchase
Leveraging our strong cash generation to return value to shareholders by reducing shares outstanding.

At Least
$20
Operating EPS*

$15.25

$13.44

$11.67

$3.32

$1.81

--- Operating (non-GAAP) EPS*
Segment Pre-tax Income*,**

- Software
- Services
- Hardware/Financing

* Excludes acquisition-related and nonoperating retirement-related charges.

** 2000 and 2001 exclude Enterprise Investments and not restated for stock-based compensation. Sum of external segment pre-tax income not equal to IBM pre-tax income.

2000   2002   2010   2011   2012   2015

6. Five years ago, we saw the emergence of a Smarter Planet—a world becoming instrumented, interconnected and intelligent.

The IT industry and the global economy have been transformed by massive amounts of data, new ways to deliver computing and the rise of mobile and social platforms.

Big Data is the planet's new natural resource.
Hundreds of billions of connected sensors and devices have created a massive, invisible flow of digital "1s" and "0s"—a global gusher of information.

Advanced analytics enable us to mine it.
Enterprises and institutions are analyzing this flow of streaming, unstructured data and acting upon those insights in real time.

Cloud computing is coming of age.
The model of computing known as "the cloud" delivers on-demand computing over the Internet. It brings new scale and efficiency to service delivery and enables more agile ways of doing business.

Social and mobile create a new platform for work.
With devices in hand, individuals now expect to interact with the world around them—as consumers, as students, as citizens. For many, mobile devices have supplanted the PC, consumer electronics and even the wallet.
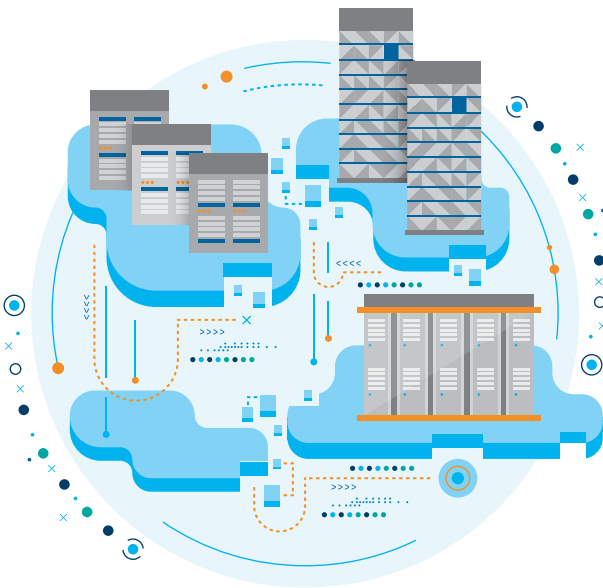
7. To lead this shift, IBM is pioneering a new computing model—what we call Smarter Computing. It has three core attributes.

Designed for Data
As new sources of data continue to grow in volume, variety and velocity, so too does their potential to revolutionize the decision-making processes in every industry—if organizations can analyze it all and extract insight.

IBM has the world's deepest portfolio of analytics solutions and software; 30,000 enterprise analytics engagements; a leading position in powerful optimized systems; and the business and industry expertise of 9,000 business analytics consultants, 400 researchers and 9 analytics solution centers. We have acquired 33 companies since 2005, including five in 2012, to build targeted analytics and information expertise—helping clients turn massive volumes of real-time, unstructured data into high-value knowledge available in real time.

Defined by Software

Entire IT environments can now be as simple, adaptable and programmable as individual systems are today—thanks to a new model known as the software-defined environment. Cloud is its first major manifestation—but it will not be the last.

In a software-defined environment, networks, storage and servers, as well as software, can be tuned flexibly to a desired workload. Hardware systems optimized for these new environments—such as IBM's System z mainframe, Power Systems, storage systems and our new PureSystems— are creating significant new business value.

IBM's SmartCloud manages 13 billion security events for more than 4,000 clients per day and connects more than 300,000 trading entities. IBM has also helped clients build more than 3,500 private clouds.

Open and Collaborative

An expanding universe of mobile devices, networked services and social enterprises requires open platforms. IBM helped open platforms such as Linux, Eclipse and Apache become standards with vital industry ecosystems, and then we developed high-value businesses on top of them. Today, IBM collaborates broadly to support open platforms such as OpenStack and Hadoop.

IBM has been the market leader in social enterprise software* for the past three years. With thousands of mobile experts, 270 patents in wireless innovations and 160 IBM Research scientists focused on mobile technologies, IBM has helped more than 1,000 clients become mobile enterprises. Looking ahead, we will integrate these capabilities with the powerful behavioral analytics of newly acquired Kenexa to help leaders of human resources build smarter workforces.

* IDC, "Worldwide Enterprise Social Software 2011 Vendor Shares," June 2012.

8. The infusion of digital intelligence into the world's systems is changing the way people, organizations and entire industries approach what they do.

In thousands of Smarter Planet client engagements, IBM is helping our clients seize competitive advantage, not only through improved productivity but by reframing their industry's issues in unexpected, often counterintuitive ways.

Smarter Stock Exchange
To compete with exchanges in places like London and New York, the Santiago Stock Exchange needed to handle the growing volume of high-frequency and algorithmic trading activity—and do so from the ground up. Working with IBM, it built a trade processing solution that increased capacity tenfold, cut latency to microseconds and enabled real-time fraud surveillance. The Exchange's transaction volume is up 50 percent in the first year.

Smarter Wind Energy
Vestas, the world's largest windmill manufacturer, is tapping into the power of an IBM supercomputer and Big Data analytics software to model past, present and future wind patterns—a process that involves huge amounts of data—to optimize the location and design of sites its customers are developing. Vestas's system is on track to digest and analyze 20 petabytes of information in hours instead of months. The result: fewer customer power disruptions and more predictable revenues for utilities.
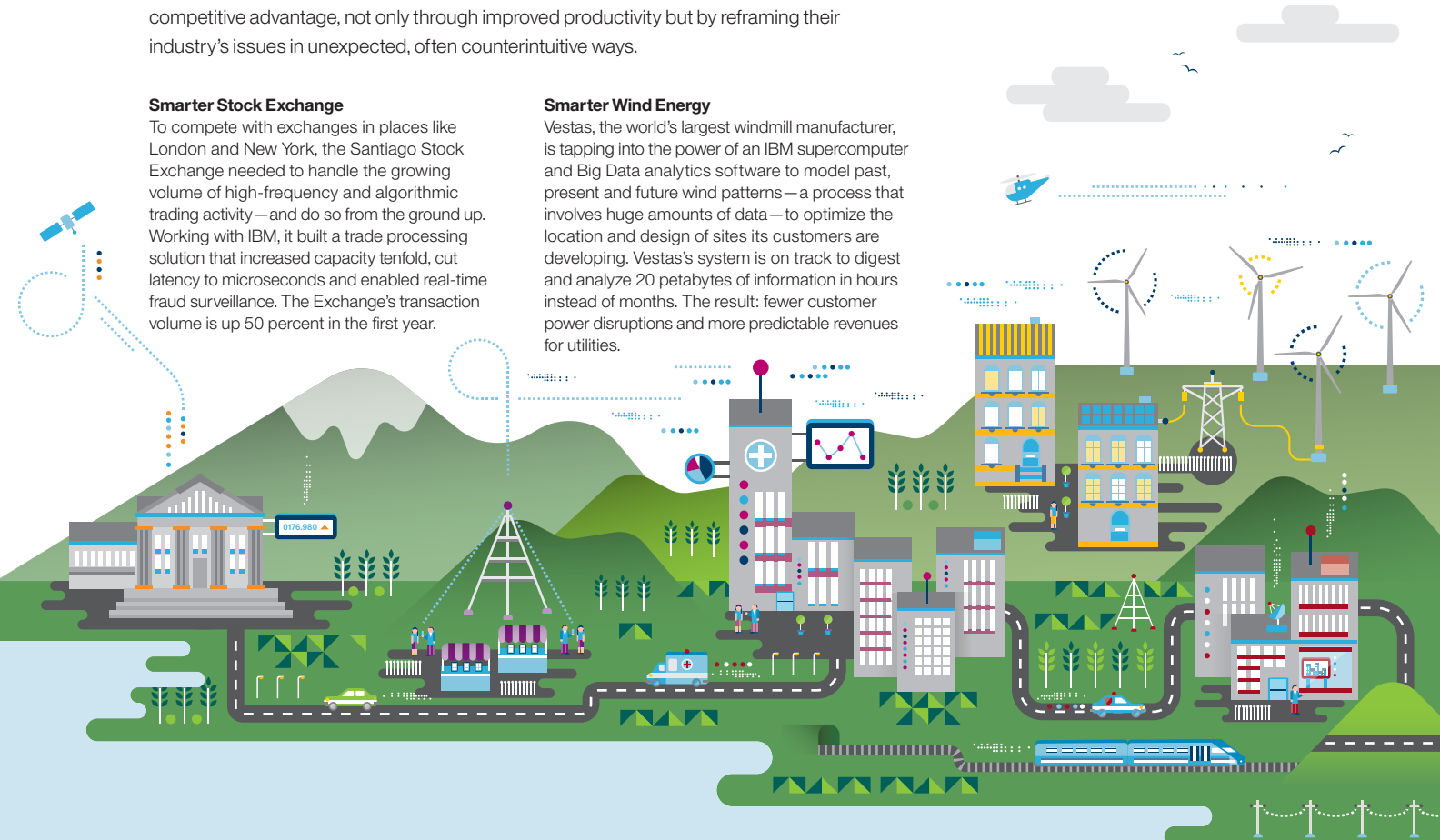
Smarter Customer Retention
Pakistani telephone provider Ufone faced a challenge common to start-ups in emerging markets. After a period of rapid growth— reaching 24 million subscribers in less than a decade—it now must retain those customers in an increasingly competitive market. IBM analytics enable it to scan call detail records in near-real time, flagging customers who fit the profile for a particular promotion. Today, by issuing offers customized to a user's unique usage patterns, Ufone has doubled its campaign response rates.

Smarter Cancer Treatment
Memorial Sloan-Kettering Cancer Center is working with IBM to use the cognitive computing capabilities found in IBM's Watson to help doctors develop personalized, evidence-based cancer treatment options. The system uses insights gleaned from the deep experience of Memorial Sloan-Kettering's world-renowned oncologists to provide individualized treatment options based on a patient's medical information, the synthesis of a vast array of updated and vetted treatment guidelines, and published research. The result: a decision support system for physicians that will offer individualized, confidence-weighted treatment options for their patients.
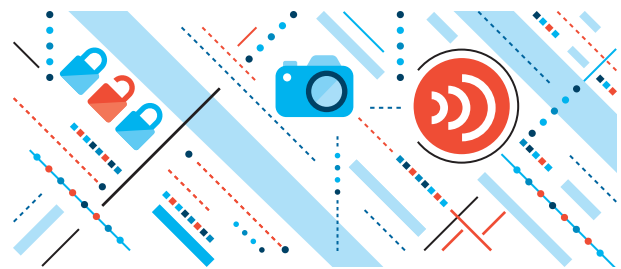
Smarter City Operations
The Philippines city of Davao's 1.5 million citizens will be the first in Asia to benefit from an Intelligent Operations Center. It ties together data and operations of four agencies—crime prevention; emergency response; threat prevention and response; and traffic management. Geolocation mapping, in combination with GPS-equipped task forces on the ground, will allow officials to analyze building, street and infrastructure data to substantially reduce response times. A new early warning system will monitor key risk indicators so agencies can take quick action before situations escalate.
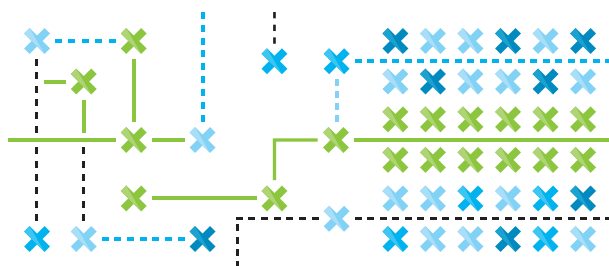
9. Looking ahead, IBM Research is probing the future of information technology.

For all its remarkable advances, computation in the past half-century—the era of "programmable" computers—has been limited to "yes/no" decisions. The new era now emerging will unlock far deeper understanding of the complexities and ambiguities of the real world—both natural and man-made.
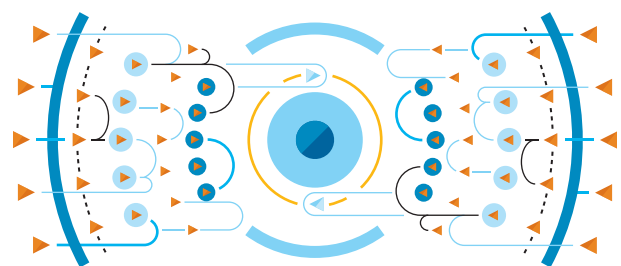
Doing so will require both steady incremental advances and true scientific breakthroughs that come only from deep, multidisciplinary research—such as that underway today in IBM's labs.

Massive-Scale Analytics for Cybersecurity IBM researchers have found cyber criminals hiding in billions of log files by surfacing small "tells" in the actions of attackers who elude even the most advanced virus detection.

Accelerated Discovery IBM researchers are unlocking data-driven "white spaces," such as finding new uses for drugs already proven safe in the data of 15 million patents, 18 million scientific papers, 10 million chemical compounds and 100 million genes.

"Synapse" Chip IBM researchers are now developing cognitive computer chips that learn without programming. Modeled on the human brain, they have already simulated more than 500 billion neurons and 100 trillion synapses.

Quantum Computing IBM researchers have taken a step closer to a practical quantum computer, based not only on digital "1s" and "0s" but also on multiphased "qubits" that enable millions of computations at once.

Atomic-Scale Memory IBM researchers have extended the frontiers of the unimaginably small by showing the possibility of storing a "bit" of memory on just 12 atoms. Such a breakthrough holds the potential to increase storage capacity one thousandfold.