IBM Centennial Lecture
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Prepared Remarks

Introduction: How to Survive for a Century

I was asked to speak here today to give some perspective on building a sustainable organization, but also to hear from you – our future leaders – on what you think is important for creating a legacy. This year marks IBM's 100th anniversary. That's a remarkable milestone to reach – no one else in our industry has managed it, and only a few enterprises or institutions of any kind have. But we don't view this only as an occasion to celebrate our past. Instead, we are looking ahead, and we're thinking about what our 100-year history tells us about the world today, and tomorrow.

Most importantly, we want to engage with future leaders like you – to share perspectives and deepen our collective understanding of what individuals and institutions need to do to succeed in today's globally integrating, technology-infused world. We believe that these insights are important for anyone in a leadership position – but they are especially critical for the next generation of leaders and forward thinkers who are trying to chart their path as global citizens.

Based on IBM's experience over 100 years, I believe that one challenge you will face as a leader once you graduate from here is how to reinvent your organization – whether that organization is a business… or an arm of government… or a university. We have learned that institutions are not permanent structures, even when they are very successful for a time. Rather, they are evolving organisms. And the job of each generation is to adapt them to a continually changing world.

So, let me begin with two questions: What enables a company to survive for 100 years? Even more, how can it remain a leader for such a long time?

In 1962, Thomas Watson Jr. – IBM's chairman and the son of its founder – stood before a lectern at another great university – Columbia University in New York City – and he addressed an audience of future leaders. IBM had recently turned 50. Tom was invited to offer his thoughts on what half a century of corporate life had taught his company – and what other leaders might learn from that history.

He began with a striking statistic. Of the top 25 industrial corporations in the United States in 1900… only two remained on that list by 1961 – one of those because it had absorbed six others from the original list. Two companies had disappeared, and the remaining 15 had slipped far behind.

As he said, "Figures like these help to remind us that corporations are expendable, and that success—at best—is an impermanent achievement which can always slip out of hand."

Now, here we are, 50 years later, and IBM is celebrating its Centennial.

So, what have 100 years of history taught us? Well, one thing they have taught us is that Tom was right – success is fleeting. Of the top 25 companies on the Fortune 500 at the time of Watson's lecture… only four remained in 2010.

More importantly, though, the past 50 years have taught us something about how any business or institution can achieve continued success and impact. It's really quite simple: Long-term success is the product of managing for the long term.
Of course, everyone pays lip service to that. But really taking it seriously means some clearly identifiable behaviors and choices. And IBM's experience through a century of corporate life provides valuable lessons in its practice.

I believe that three lessons in particular are of special urgency for the world you will inherit, as tomorrow's leaders, and to decisions you will need to make for your organizations and communities:
- How the organization must change as the world economy changes
- How the organization must change in response to changes in technology
- How the organization must remain the same at its core, in the face of a changing world.

Let me briefly touch on each.

Lesson One: How the organization must adapt as the world economy changes.

The single most important reality facing businesses and institutions today, I would put it to you, is the reality of global integration. Of course, the world has been "going global" for a long time – that's nothing new. But what this means in each successive era is very different. Being a global corporation today is very different from what it was when IBM was founded 100 years ago.

From the time he arrived at C-T-R, IBM's predecessor company, in 1914, Thomas Watson Sr. believed that globalization was inevitable. He was convinced that an integrated world economy was the future – indeed, that it was the key to world peace. This latter hope remains unfulfilled… so far. But IBM's mindset has been global from the start.

Through most of the 20th century that meant becoming what economic historians would later come to call a "multinational." In this model, the parent corporation created mini-versions of itself in country after country in order to be able to operate amid the crazy quilt of international trade and regulatory barriers. IBM itself was one of the clearest examples of a mid-century multinational.

All that began to change in the 1980s and '90s, with the lowering of trade barriers… and especially the emergence of the World Wide Web. As a result, a massive global re-balancing is now underway.

In part, this is about the world becoming smaller and "flatter." Global integration is creating new economic opportunity – most importantly though hundreds of millions of people around the world entering the middle class. They are becoming consumers and entrepreneurs… and this is a macro-economic fact of historic proportions.

But this shift is also changing how we work. The form and operations of all organizations – established businesses and start-ups… large corporations and local shops… as well as governments, communities and universities – are changing and will have to change a lot more. Global integration is forcing us once again to re-set our world view – and to rethink how we see our role in that world.

Because we believed that this shift was inevitable, we transformed IBM over the past decade from the old multinational model to something new… and far more systemic – what we call a globally integrated enterprise.

This is not only changing the market opportunities we pursue… but also the way we work and run the company – from sales and marketing to HR and research. We have moved expertise and decision-making out of corporate headquarters. Today, IBM's operations are globally networked. Our procurement function is headquartered in China. Our Web services delivery is located in Brazil. We have dozens of research and development labs around the world.

We have also changed our understanding of the skills, relationships and responsibilities that IBMers must assume to make this globally integrated model work.

Let me give one example that encompasses all these shifts, in the area of leadership development.

In the multinational era, you prepared future leaders through "overseas assignments" – typically for two years, and typically in mature markets. As a management development system, it was expensive, and limited in scope to a handful of executives.

But today, those old multinational approaches no longer work. We need to create a whole generation of global professionals and global citizens… and the model of overseas assignments won't scale to that.

So, three years ago, we launched an experiment we call the Corporate Service Corps. It puts together diverse teams of high-potential IBMers from around the world… and sends them for a month to communities and cities in emerging markets such as Ghana, the Philippines, Turkey and Vietnam. They work in communities with NGOs and local leaders to jump-start their economies… and to make their cities smarter. And when they come back, they spread what they have learned to their colleagues through social media.

The results have been highly encouraging. Not only can we provide this experience to far more IBMers – thousands rather than dozens – but these targeted interventions are having a transformative impact… both on local communities and on the IBMers themselves. Most say it is one of the most meaningful experiences of their lives.

And oh, by the way… it is also helping us to gather invaluable learning about the reality on the ground in these emerging markets. It's strengthening IBM's societal relationships. And it is surfacing profitable new business opportunities.

As I said, the world has been going global for centuries… but that will mean very different things in the 21st century than it meant in the 20th. To be a leader in the future will mean thinking globally… seeing the planet as a whole. And that's not only about geography.

Lesson two: The role of technology for today's leaders

It is widely accepted that the major shifts in technology have a profound impact on the course of history, and on the form of human organizations. We can look back to the invention of the tools of agriculture, and how that enabled humans to live in cities. We can look to the technologies invented by the Romans, and by the Chinese, which enabled the emergence of great empires. And in the modern era, we can look to the impact of the technologies that spawned the Age of Discovery… and the Industrial Revolution.

Over the course of the last century, the most profound impact has come from information technology. We have seen it evolve from a set of tools… to an industry… to a science… to a pervasive aspect of the modern world.

Through this era, IT has become much more than a back-office engine or a never-ending flow of consumer gadgets. It has therefore become something that every leader must master. And I don't mean learning how to tweet or use an iPad.
- Technology is the way we now see the world – including those dimensions invisible to the human eye.
- It's how we map and understand the dynamics of the world's complex systems.
- And it is increasingly how we decide on the best course of action – and put it into effect.

Indeed, this technology now pervades every aspect of the way our world works – the systems and processes that enable services to be delivered… physical goods to be developed, manufactured and sold… everything from people and freight to oil, water and electrons to move… and billions of people to work and live.

Today, there are nearly a billion transistors – which is a semiconductor device used to amplify and switch electronic signals -- per human, and each one costs one ten-millionth of a cent. There are 4 billion mobile phone subscribers, and 30 billion Radio Frequency Identification tags produced globally. These sensors and devices give us, for the first time ever, real-time instrumentation of a wide range of the world's systems – natural and man-made.

The planet isn't just instrumented… it's also interconnected. Today there are two billion people on the Internet – but systems and objects can now "speak" to one another, too. This is what some call the Internet of Things. Think about the prospect of a trillion connected and instrumented objects – cars, cameras, roadways, pipelines… even livestock and pharmaceuticals.

All of this is creating vast amounts of data. And through advanced analytics and ever more powerful supercomputers, we can turn that data into insight.

All over the world, we see forward-thinking leaders who are mastering these new capabilities. They're applying all that intelligence to make systems, processes and infrastructures more efficient, more

productive and responsive. We have clients building traffic congestion management systems, smart electrical grids, intelligent sewer systems, and enhancing electronic medical record systems.

So you miss this idea if you only see technology merely as a succession of gadgets, websites and "next big things." What IBM's history tells us is that it is much more. Gadgets come and go… and they inevitably become commodities. But this deeper role of information technology – as a science… as a pervasive fact of the way our world works – that's something that I believe you as leaders have an obligation to understand. Not its mechanics, but its implications.

I'm proud to say that IBM has been a leader in every dimension of IT's evolution. We started off making clocks, scales and – believe it or not – cheese slicers… in addition to the punched-card tabulator. But we never identified our purpose with one product or technology.

Today, we still provide many of those… along with advanced services, software and analytics. But some of them we don't – and that's all about reinvention.

For example, we introduced the IBM Personal Computer in 1981 and the very popular Thinkpad in 1992. It was by any measure the most recognizable brand for us – and arguably the only brand that touched individuals… tens of millions of people. For all these reasons, the idea that we would divest the PC business was, for many – pardon the pun – unthinkable.

Yet, we knew that the emerging computing model I have just described would only accelerate the commoditization of the PC industry. And that's not where we wanted to be. Given the continual flow of technological progress, forward motion is the only way for a tech company to stay out of commodity hell. So we decided our PC business would have a better future in the hands of another company, which turned out to be Lenovo.

We are innovators. In 1981 the PC was an innovation. Twenty years later it had lost much of its differentiation. It was time to move on – to the future.

A recent project that you may have read about or seen on TV is Watson. IBM Research built a question answering computing system, named Watson after our founder Thomas J. Watson. And in February of this year, Watson competed on the television trivia program *Jeopardy!,* which airs across most of North America, defeating the show's two all-time champions.

Jeopardy! was an exciting way to prove that we could build a computing system able to rival humans' ability to answer questions with speed, accuracy and confidence. Much of the challenge behind these vast amounts of data is that it's not all recorded in a common language that computers can understand, but rather in natural language – not computer language.

As exciting as Watson's victory is, we didn't invest four years and millions of dollars simply to win television trivia. We did so because this remarkable system represents the new frontier of information science.

First, and most visibly, that frontier involves a new way for computers and humans to interact – specifically, the ability of a computer to understand natural language. This holds enormous potential for making the world's systems smarter, as we apply powerful analytics to vast quantities of data and real-world human behavior in medicine, government, commerce, finance and beyond. The technology underlying Watson can bring rapid answers to vital questions affecting people's lives. We have already begun working on applications in healthcare, banking and more.

Second, Watson also represents a new paradigm in IT – a coming generation of systems that are designed for specific workloads and that can actually learn from their own experience – their mistakes and successes, as well as those of others.

It's a compelling reminder of the potential of information science to make our world work better, and of IBM's unique capabilities to make that potential real.

So, we are entering a very different world, and we can only begin to see the challenges we will face in years to come. You as our future leaders will need to understand and grapple with the new issues this information era will present and work to keep moving our organizations and systems into the future.

Lesson three: How an organization retains its distinctive core through continual change.

Perhaps Thomas Watson Sr.'s most enduring contribution to the world was the notion that an organization can – and must – undertake the intentional creation of its culture.

Of course, every organization, city or community has a culture – generally defined as "the way we do things around here." It's usually an extension of the organization's founder – his or her beliefs, actions, decisions, personality.

Now, there's no question that the cult of personality in business is a powerful lure – the idea of the charismatic, superstar leader. The press cultivates it. The Street trades on it. Some employees crave it. Thomas Watson Sr. himself was an example of it.
But what happens when the founder is no longer around? The challenge becomes how to perpetuate a culture through time. That's hard. For a century? That's really hard.

How do you bottle up what makes any organization distinctive – what makes Telecom Italia, Telecom Italia? What makes ENI, ENI – or for that matter, what makes this university unique – and make that a lasting foundation for your organization's culture?

Fifty years ago, in his lectures at Columbia, Tom Watson Jr. located the vitality of an organization's culture not in rituals like team-building exercises or company songs – though IBM did all of that and more – but in its shared values or beliefs.

Here is what he said:
    "I firmly believe that any organization, in order to survive and achieve success, must have a sound
    set of beliefs on which it premises all its policies and actions. Next, I believe that the most important

single factor in corporate success is faithful adherence to those beliefs. And finally, I believe that if an organization is to meet the challenges of a changing world, it must be prepared to change everything about itself… except those beliefs… as it moves through corporate life."

Let me repeat that last line: "be prepared to change everything about itself except those beliefs."

Tom Watson was not talking about moral precepts. This is not about legal compliance or ethical behavior – every organization and individual needs to do that.

For him, and for IBM, a company's beliefs were about its identity – what makes it distinct… what shapes its decisions and behaviors. If you could codify and sustain that core, it would ensure that the company remains unique and differentiated… decade after decade.

Time has taught us how essential this is… how it can go awry… and how we have to continually revisit and re-contextualize it for new generations.

In fact, I would argue that the need for this foundation is greater today than ever before. In a globalizing world – with work spread across vast networks of organizations and individuals – people need something that holds them together, that provides a touchstone for their actions and decisions.

This is why we decided, nearly a decade ago, that if IBM was going to return to greatness in a new era, it required getting back in touch with our DNA.

One of the first things Sam Palmisano did as CEO was to initiate an effort to reexamine our core values. But he didn't do it in the traditional way. We no longer live in a world where the chairman can simply lay out a company's "Basic Beliefs." IBMers are a super-smart bunch, and smart people today tend to be independent… even a bit cynical. You can't come down from on high and tell them, "These are your values."

So we took a different approach. We came together online, as a global population over 72 hours in what we call a "jam," and we hashed this out. It was messy, passionate and contentious… But the values that emerged were not "IBM's values"… they were IBMers' values.

We've done a lot of work since then. We have globally integrated our company. We have also remade IBM's portfolio of products and services… including the divestiture of our PC business, which I mentioned before. That decision, which could have caused a rift inside the company, was instead embraced – not merely on the basis of economics and strategy… but because it was consistent with our values.
Indeed, I believe that none of these changes would have been effective or sustainable if we had not first gone back to basics, back to our roots, back to the foundation of our culture… and brought it alive for a new era.

IBM's history, in fact, can be seen as a century-long experiment in how to institutionalize and perpetuate what makes us… us. And, as the next-generation of leaders, I would suggest that this will be your most fundamental job, no matter what kind of work, organization or community you wind up leading.

Conclusion: A Hopeful Future

The measure of any entity – business, government, university or other institution – is ultimately: what was its impact? How is the world different because it existed? And it's really quite simple: An organization won't change the world if it itself can't survive change. Of course, longevity isn't sufficient for impact… but it is necessary.

As I said… Long-term success is the product of managing for the long term. And I believe that managing for the long term comes down, most fundamentally, to an enduring and evolving identity or culture… grounded in core values that do not change.

I admit to bias, but I believe the past century has been better because of IBM… and I am confident that the next one will be, too. I also like to think that we will still show up near the top of the Fortune 500 for the year 2061… and 2111.

The world today finds itself at an inflection point – in the evolution and application of technology… in the continuing march of global integration… and in the ways we manage and sustain our institutions. And for you, as the next generation of leaders, this is the dawn of a new age… one that you have a real opportunity… and a historical obligation… to shape.

The good news is that the key precondition for real change now exists: People want it. And they are hungry for leadership. Such a moment doesn't come around often – perhaps a few times every century – and it will not last forever. I urge you to seize it.

Despite the litany of challenges we face, I believe that the forward-thinking individuals, communities, companies and countries of the world can build a smarter, more secure and more sustainable planet.