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Reinventing Your Company with AI



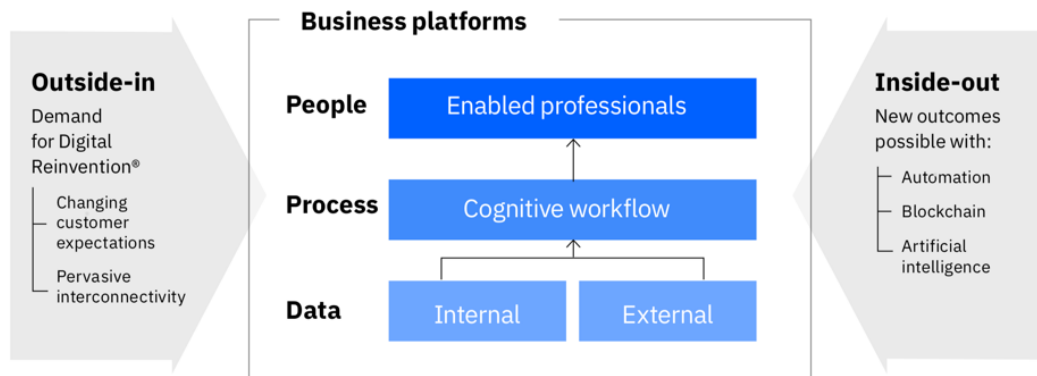
*A new era of business reinvention is dawning. Organizations are facing an unprecedented convergence of technological, social and regulatory forces. As artificial intelligence (AI), automation, Internet of Things (IoT), blockchain and 5G become pervasive, their combined impact will reshape standard business architectures. The “outside-in” digital transformation of the past decade is giving way to the “inside-out” potential of data exploited with these exponential technologies, writes Dr. **Alessandro CURIONI**, Vice President of IBM Europe, Director of the IBM Research Lab in Zurich, and speaker at the upcoming [stars Switzerland symposium 2019](#). Curioni refers to this next-generation business model as the Cognitive Enterprise.*

Defining Platforms

The Cognitive Enterprise is composed of multiple business platforms, but first, let's define a platform.

As companies around the world describe their strategies they are anchoring the idea of a “stage” or “field of operation” as a platform where a range of unique capabilities can be deployed and where they can seek to establish a control point over a range of value-creating activities.

A platform-centric business model

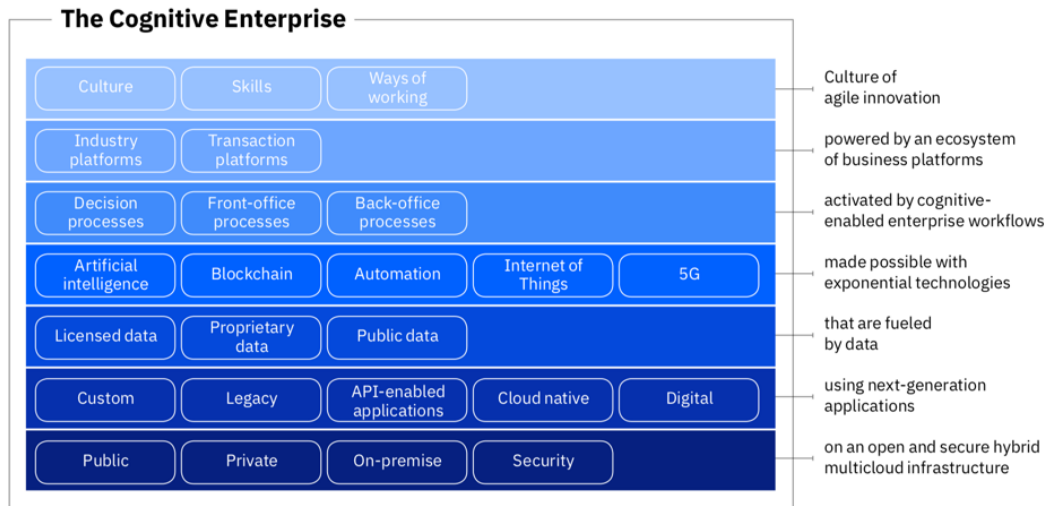


Source: IBM Institute for Business Value (IBV) analysis.

Here are some examples:

- *Business platforms* can differentiate an organization by combining data, unique workflows and expertise to drive competitive advantage. Examples include risk management for a bank, claims processing for an insurer, merchandising for a retailer and supply chain for a consumer goods company. They will often be underpinned by technology platforms and may connect into other ecosystem business platforms. These business platforms can take three different forms and scopes of activity including internal platforms, industry platforms and cross-market platforms.
- *Technology platforms* enable application and infrastructure platforms that underpin workflows and support business platforms. Next-generation enterprise applications such as SAP, Salesforce, Workday and the cloud-based infrastructures such as Azure, Hyperledger for blockchain, IBM Cloud and Red Hat come to mind. We are also seeing new classes of technology platforms emerge for AI, IoT, automation and more.
- *Mass consumer platforms* are the widely leveraged, mainly customer-centric platforms that have been the disruptors of the past decade, such as Amazon, eBay, Alibaba, Facebook and the like. Mass consumer platforms often generate data or insights that can be sought after by business platforms as part of their value propositions.

Capability layers for the Cognitive Enterprise



Now that we have defined platforms, let's put them to work.

Imagine that the Cognitive Enterprise is composed of multiple business platforms. One, or several, acts as the core or primary platform(s), providing key differentiation. Organizations leverage and access secondary or supporting platforms as well. For example, middle- and back-office processes and underlying technology suites may be used to partner with other industry players or third parties.

The business platform, then, is made up of capability layers. Each is subject to major transformation, and the potential that we envision for companies and organizations is huge. We think that incumbents will – as we are increasingly seeing – strike back if they can orchestrate change at scale. Companies have the opportunity not only to attack and secure new markets but also to restructure their cost bases for the long term – with a possible huge payoff to their bottom lines.

I see companies placing bets on the creation of business platforms to solidify competitive advantage and differentiation. These platforms must be massively digitally connected from the outside-in and fully cognitively enabled from the inside-out. Many of the strategic plays are based on the ability to redefine the business within its four walls by leveraging the estimated 80 percent of global data that is still proprietary.

Others see the chance to play a platform role across their industries. A few companies are using platforms to expand their expertise and compete in markets adjacent to – but until now separate from – their traditional businesses.

Most organizations, though, are just beginning to prepare for the dramatic changes that will characterize the coming decade. They are still struggling to define their strategic differentiation. They are experimenting with multiple technology proofs of concept to evaluate process impact. And they are tackling the difficult task of shifting their applications and infrastructure from legacy to new.

Most importantly, organizations are finding that the biggest barriers to progress are their own people and culture. They need different mindsets and skills to take advantage of new business capabilities.

Humanity is the Heart of the Cognitive Enterprise

For all the focus on the impact of new technologies and AI, the most important aspect of the Cognitive Enterprise is still going to be its people. The new technologies and corporate architecture enhance both the customer and employee experiences, provide insights to spark creativity, and engage and entertain. All of this raises the bar for expectations around the personal touch, human interaction and empathy – qualities that allow companies to stand out.

Even now, we can visit an Apple Store and be amazed by the sales support technology and frictionless retail transaction. But we still value the expertise of the sales assistants and their help with navigating choices and getting the most out of the technology we purchase. Doctors, too, can increasingly leverage AI to help make diagnoses and explore treatments. Yet the need for a compassionate “bedside manner” is critical to building a trusting bond with the patient. As the “human-machine” interface shifts, remembering that businesses are composed of people – and ultimately exist to serve people – is critical.

The culture of the Cognitive Enterprise will need to keep these human factors front and centre. The professionals and experts who sit in our newly enhanced workflows need to apply even more experiential intimacy, creativity and empathy. This clarifies and communicates a clear company purpose. It anchors the underlying values which should still inform the core of these new business models.

Making this work seamlessly will require a much stronger set of continuous feedback mechanisms and methods of engaging the wider organization in the co-creation of attractive experiences. The most successful companies will be those that excel in this area.

How to start the journey

Practically every organization is striving to embark upon this next wave of transformation, establishing digital strategies and appointing Chief Transformation and Chief Digital Officers. They are queuing up Centres of Excellence for AI, data science and the cloud. Proofs of concepts and minimum viable products are pouring out of agile teams. And yet, leaders struggle to engage their wider organizations and middle management in their visions.

The issue? What to do with legacy systems, skills and operations that reinforce old behaviours. Attempts to build “digital islands” have largely failed to transform enterprises in sustainable, scaled or impactful ways. Organizations need a fresh approach to build new platforms and skills while maintaining, modernizing and operating their legacy environments.

The “garage” answer to a legacy question

Where is the answer to this challenge? In the “garage”. The garage approach involves the creation of cross-organizational spaces where cross-functional teams can come together with strategic partners and other ecosystem players and start-ups to co-create, co-execute and co-operate the new business platforms.

Garage environments can jumpstart innovation by putting technology options into the context of customer journeys, critical workflows, pain points and value potential. They allow for early testing of ideas against customer and employee feedback, avoiding wasted activity. Design-thinking, agile and DevOps approaches move concepts quickly from ideation into day-to-day operation. Scrums, squads and sprints can break up the build process into manageable, valuable building blocks. In the garage, new business platforms can be developed at greater pace and lower risk, enabling benefits from continuous learning.

To deliver true transformation, garage environments must align with the factory approaches that are maintaining and modernizing legacy environments. When garages and legacy factories are synchronized, organizations can build new platform components while migrating legacy architectures, skills and operations to hybrid multicloud environments and other new platforms.

The garage approach can also be instrumental to the change process. Creating metrics for the impact of each building block informs the commitment of resources to winning ideas. Metrics can reinforce the clarity of outcomes and intent for the business platform. They can also provide proof points to the organization as more components migrate to business platforms. Garage participants can become a network of advocates for digital and cognitive change.

The transition to a Cognitive Enterprise is daunting. Incumbents and disruptors see a huge opportunity, but also must navigate a great deal of complexity and choice.

But remember the prize at stake: the next level of competitive advantage.



*Dr. **Alessandro CURIONI** is an IBM Fellow, Vice President of IBM Europe and Director of the [IBM Research Lab in Zurich](#), Switzerland. On top of being responsible for IBM corporate research in Europe, he coordinates global research in IoT and Security. Alessandro is an internationally recognized leader in the area of high-performance computing and computational science, where his innovative thinking and seminal contributions have helped solve some of the most complex scientific and technological problems in healthcare, aerospace, consumer goods and electronics. He was a member of the winning team recognized with the prestigious Gordon Bell Prize in 2013 and 2015.*

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