Digital transformation leverages digital technologies and the data they produce to connect organizations, people, physical assets, and processes. It often leads to significant changes in business strategy to capitalize on emerging customer needs. These changes may reshape a company or disrupt an entire industry.

While many executives believe that digital transformation should be a strategic priority, few companies have fully implemented it. Lack of digital leadership, a burning platform, and familiarity with digital are common barriers. But there’s an even more fundamental problem: many people have only a fuzzy concept of what digital transformation actually is.

New research from The Conference Board defines digital transformation, describes its business impacts, and outlines the implications for human capital, presented in the pages that follow. Here are the actions that CEOs need to take to accelerate digital transformation in their own organizations.

**Actions to drive digital transformation**

1. CEOs must give stakeholders a clear vision for what digital transformation means for the company and lead the enterprise change process. They must articulate the difference between digitization (using technology to do something better or faster) and digital transformation.

2. CEOs should consider whether their executive team is equipped to lead digital transformation or whether it needs additional expertise.

3. Executive teams must define the capabilities the organization will need to execute its digital strategy, and evaluate the options for building
Digital transformation has a ripple effect on business and human capital

DIGITAL TRANSFORMATION harnesses the synergy of four central elements—technology, connectedness, data and analytics, and digital strategy—to create business value by meeting customer needs. Digital transformation may be concentrated in selected parts of the organization, or reshape the company, or disrupt an entire industry.
them—whether by leveraging employees, external talent, partnerships, crowdsourcing, digital technology, or some combination of these.

4 Company culture, structure, jobs, operational processes, technology, talent needs, performance criteria, and policies may need to change to align with digital strategy.

5 Companies must also encourage and reward knowledge sharing and collaboration and develop employees’ innovation skills.

6 National cultures in some countries are very hierarchical. Leaders and managers in these regions may need to develop new ways of relating to their teams. Employees must trust that their ideas will be valued and given a fair hearing.

The four elements of digital transformation

1 Technology Digital technologies, platforms, and applications are a critical enabler, but technology is just one component of digital transformation.

2 Connectedness The Internet of Things (IoT) is one example of digital technology’s ability to connect organizations, people, buildings, machines, and other devices to each other, often for the first time.

3 Data and analytics Wherever digital technology creates connectedness, it also generates data—continuously and in massive volumes. Digital transformation is fueled by this data and by the information and insights that can be extracted from it and infused back into the business.

4 Digital strategy Threats and opportunities emerge more quickly in the digital economy, often from new or nontraditional competitors.

The business impacts of digital transformation

The synergy of these four elements creates new challenges and opportunities. The figure on page 2 shows digital transformation’s ripple effect on the business, human capital, and the challenges that CEOs must address.

Closer relationships with stakeholders Companies can have constant contact with customers and monitor changing needs and expectations.

Customization Data and analytics help companies differentiate among market segments and tailor their online content, marketing, products, and services accordingly.

Collaboration and co-creation Companies can combine forces with ecosystem partners—including customers, suppliers, partners, and even competitors—to innovate more quickly than they could on their own. They can crowdsource solutions both externally and internally.
Disruptive business models Digital transformation may rewrite the answers to fundamental questions like “What business are we in?” and “How do we make money?”

Transparency Digital technologies reduce the organization’s control over who has access to what kinds of information both inside and outside the organization.

Blurring of organizational boundaries The boundaries that once separated an organization from its environment become more permeable. The distinction between insiders and outsiders becomes less relevant.

Democratization By reducing hierarchy, empowering front-line teams, and encouraging risk taking in innovation, digital transformation creates a more level playing field within organizations.

Digital transformation’s human capital implications
The changes that digital transformation brings have major impacts on human capital:

Digital transformation and leadership Leaders must understand that digital transformation is about more than technology. They must have a vision for how digitization can transform their business and be able to explain it in a compelling way to stakeholders. Often, they must reshape the organizational culture and structure, which requires skillful change management.

Digital transformation and organizational design, including the role of networks Hierarchies will be flatter. As organizational boundaries become blurred, information will become more democratized rather than carefully guarded. “People” data that was once confidential becomes public, as when managers’ employee engagement scores are posted or company culture is discussed on social media sites. Company structure will be more fluid, organized around projects or “work cells.” Networks will become a source of competitive advantage.

Digital transformation and work, jobs, talent planning, and deployment Companies will need to rethink the optimal way to get work done, whether by deploying it to machines, people, or a combination of both. Better search and matching tools will allow companies to tap into talent anywhere. Jobs may be broken down into tasks and tasks allocated differently.

Digital transformation and skills The demand for people with lower value skills will decline and companies will need to decide whether they can be reskilled and redeployed. Highly skilled people will benefit most, while those with mid-level skills will be less sought after. Individuals will be able to build and manage their personal brand, acquiring badges for their knowledge and skills and ratings for their knowledge, credibility, and influence.
Digital transformation and the role and business value of HR Digitization of labor becomes a competitive advantage in the marketplace. Building and managing temporary relationships with talent will become more important. Employees will have less job security—partly because the knowledge and skills their employer needs may change quickly, and partly because companies will have better systems for finding and engaging talent on a temporary basis.

Digital transformation, employer branding, and talent acquisition Greater transparency can hurt or help employers’ access to talent. Online talent platforms enable companies to “see” and find talent more readily. Unfiltered news about the company spreads rapidly, outside of corporate control. People can share their views of both the workplace and individual leaders and managers. By making social media part of their employer branding and recruitment strategy, companies can leverage this new, digitized ecosystem for competitive advantage.

Digital transformation and performance management Companies can use technology, data, and connectedness to monitor individual performance and provide employees with continuous, real-time feedback. Performance, behavioral, wellness, and other measures can be correlated with organizational events, managerial actions, and team interactions to better understand their impacts. Leading companies may report on workforce wellness in their social balance sheets.

Digital transformation and learning and development Digital transformation will affect what new graduates, other applicants, and employees need to know—and how, when, and to whom that learning is delivered. Individuals will have greater visibility across the entire talent ecosystem, making them smarter career strategists and consumers of learning.

Digital transformation and employee engagement Companies will need to manage the impacts of robotics and digitization on the workforce, including looser connections between employer and the individual, more job insecurity, and greater transparency. Transparency may also increase churn in employment. Culture will impact engagement and retention, but digital technologies make it easier to monitor these on a continuous basis.

Digital transformation and compensation and benefits Companies will need to create incentives to encourage new workforce behaviors. They will have better information about their competitors’ compensation and benefits practices and trends in specific markets. Using analytics and predictive modeling, they can model the impacts of alternative comp and benefit choices and customize rewards to individuals or talent segments. Individuals also have better knowledge about market trends in compensation, enabling them to compare employers’ offers.
<table>
<thead>
<tr>
<th>Business impacts</th>
<th>Human capital impacts</th>
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| Closer customer relationships | • Demand for new skill sets to build closer customer relationships; the human capital (HC) function must recommend best buy/build/rent/borrow strategy to achieve  
• Closer relationships with talent, both inside and outside the organization  
• Ability to mine real-time data to track employee engagement and identify issues within the workforce that need to be addressed |
| Customization               | • Opportunity to identify key segments of the workforce, critical jobs, flight risk, etc. and develop customized talent strategies  
• Opportunity to build more robust employee profiles with voluntarily provided data  
• Requires knowledge of shifting data privacy regulations and attitudes from country to country  
• Growing demand throughout the organization and increased competition for data and analytics skills  
• Need to develop all leaders’ ability to use HC data and analytics to make business decisions  
• May require culture change to increase data-driven decision making throughout the organization |
| Collaboration and co-creation | • Growing importance of ecosystem partnerships and collaboration may require cultural change, new leadership skills, and a talent strategy that optimizes mix of knowledge and skills, regardless where it comes from  
• Increasing use of contingent workers and talent “borrowed” from ecosystem partners will require new attitudes re “us vs. them,” and new talent management systems and processes  
• Learning strategies needed to leverage ecosystem resources—for example, by mixing employees with talent borrowed from a start-up  
• Companies will need platforms that enable knowledge sharing and collaboration, as well as training, measurement, and rewards and recognition to support these behaviors |
| Disruptive business models  | • New lines of business, industries, markets, and customers will affect company’s knowledge and skill requirements and require change management at all levels  
• Automation, robotics, and “augmented intelligence” (people and computers) will require a reshaping of the workforce to meet changing business needs  
• Human capital must determine best strategy (e.g., buy, build, borrow, redeploy, automate, combine talent with technology) for meeting these business demands  
• Changing business needs (for example, democratizing innovation or leveraging design thinking) will require widespread training and development  
• Organizational design, structure of work, and jobs may need to be reconstructed  
• New leadership capabilities will be required, including the ability to develop a digital strategy and continuously monitor ecosystem (customers, new entrants, etc.) |
Digital transformation’s business and human capital impacts  

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<th>Business impacts</th>
<th>Human capital impacts</th>
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<tr>
<td><strong>Transparency</strong></td>
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<tr>
<td>• Leaders and managers will need to develop skills in communication and managing in a more transparent environment where employees and external stakeholders have immediate access to information the organization might once have regarded as confidential.</td>
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<tr>
<td>• Human capital strategy must address transparency’s impacts on competition for talent, employer branding, employee engagement, talent acquisition, compensation and benefits, performance management, retention, and other aspects of human capital management.</td>
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<tr>
<td>• Employees will need training and guidelines for participating in social platforms both inside and outside the organization.</td>
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<td>• Human capital executives must be well informed about data privacy regulations and which kinds of data can and cannot be shared.</td>
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<td>• Companies need policies and governance structures to ensure that they uphold or exceed local regulations and cultural values regarding data privacy.</td>
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<td><strong>Blurring boundaries</strong></td>
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<tr>
<td>• Boundaries both between organizations and within them will fade; <strong>organizational</strong> organizations will become flatter; teams will be empowered to make more decisions; jobs and work assignments will be more fluid; talent will come from inside and outside the organization.</td>
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<td>• Companies may pool workforce and other data with that of other organizations to increase the data pool and the analytic insights.</td>
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<td>• Internal and external networks will become increasingly important drivers of business results.</td>
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<td>• Employees will need tools and skills to collaborate effectively.</td>
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<td>• Real-time data sources will give companies much better information about external labor markets and individuals.</td>
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<tr>
<td><strong>Democratization</strong></td>
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<td>• Democratization (of innovation, information, influence, etc.) requires a significant culture change.</td>
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<td>• Leadership styles must be less directive and more consultative; this will require coaching and training, measurement, and rewards.</td>
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<tr>
<td>• Collaboration and network participation will be valued behaviors, requiring training, measurement, performance feedback, and recognition.</td>
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<tr>
<td>• Individuals, regardless of level, will have many opportunities to showcase their knowledge, connect with people in all areas of the organization, and build their reputation and credibility via social platforms; these changes will disrupt traditional career paths.</td>
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OUR EXPERTS

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Young has studied the "datafication" of HR in hundreds of companies around the globe. Her current research focuses on the impacts of digitization on organizations, people, and human capital’s contribution to business performance.

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Author’s note: Sherlin Nair, research associate in human capital at The Conference Board, made substantive contributions to this report.

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