Turning the Challenge of an Older Workforce into a Managed Opportunity
The Boston Consulting Group (BCG) is a global management consulting firm and the world’s leading advisor on business strategy. We partner with clients in all sectors and regions to identify their highest-value opportunities, address their most critical challenges, and transform their businesses. Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results. Founded in 1963, BCG is a private company with 74 offices in 42 countries. For more information, please visit www.bcg.com.
Turning the Challenge of an Older Workforce into a Managed Opportunity

Rainer Strack
Jens Baier
Philipp Zimmermann

August 2011

bcg.com
Contents

Executive Summary 4
Statistics and Methodology 6
Surveying the Demographic Scene 7
Review of Regions 8
Review of Industries 11
Focus on Strategic Workforce Planning 13
A Systematic Approach 15
Specific Responses 20
Key Questions That Executives Should Be Asking 26
For Further Reading 29
Note to the Reader 30
Over the next few years, it will become harder for organizations to have the right employees with the right skills in the right places at the right times. These are not new challenges: the broad contours of the labor shortage for critical skills have been recognized for years. However, the impact has never been more significant; for example, in Western Europe the working-age population has begun to decline for the first time since the dawn of industrialization. And many companies have been wrestling, with varying degrees of success, with a host of tough skills challenges. Nowadays 70 percent of German companies face shortages of qualified employees—a huge drag on the nation’s economy.

Of course, employers cannot turn back or slow down the clock. But they can do more to manage their demographic risks. With that goal in mind, The Boston Consulting Group has researched two categories of demographic risk: capacity risks, incurred primarily by employees’ retirements, and performance risks, resulting chiefly from changes in performance as employees age.

This report presents findings for 16 of the largest economies worldwide. It also breaks out relevant data by industry and combines demographic challenges on a macroeconomic level with those pertinent to individual companies. The report then describes a structured approach for analyzing the future supply of and demand for employees under different growth scenarios, broken down by business unit and by job—an approach that gives business leaders the tools they need to cope with demographic risk.

The report also provides practical advice by showcasing examples of best practice—describing companies that are tackling demographic risk effectively.

Companies need to understand all the demographic risks they face in all their key markets—as well as the impact of those risks.

- By 2050, the global population aged 60 years and older is projected to exceed the number of people under 15 for the first time in history. By 2020, the median age will reach 40 in Europe; in Germany and Italy, it will exceed 45. In Germany, the number of people over 50 is expected to rise by 68 percent by 2020.

- Even China confronts big demographic risks. The country’s one-child policy, and its drop in birthrates, will halt workforce growth by 2020, with the population declining after 2030—just two decades from now. This development, coupled with educational challenges, will threaten the health of the Chinese economy and limit its growth potential.

- Nations with large cohorts of young people are not immune from workforce risks. Although countries such as Mexico and Brazil face few capacity risks, they may be affected if their workforces migrate to countries with significant numbers of unfilled jobs. And they confront issues of employability because many of their youth are poorly educated.

It is crucial to have a systematic method to gauge and respond to demographic risks in light of the organization’s strategic objectives.

- Many employers have barely begun to address the opportunities and challenges posed by demographic risks. Among those that have, responses are often reac-
tive and undifferentiated rather than strategic, long-term, and differentiated.

To assess the full impact of demographic risk, companies need to implement a clearly structured process of strategic workforce planning (SWP), starting by forming job taxonomies and mapping future workforce demand on the basis of strategic business scenarios and supply projections, and then identifying not only the potential effects of an aging workforce but also shortages and surpluses of skilled employees.

The most successful organizations use their SWP initiatives to understand the scope of their demographic challenges systematically. By acting promptly on those insights and linking their ongoing SWP activities to the overall long-term business strategy, they turn demographic risk into managed opportunity. For example, they mitigate capacity risks not only by improving retention, leveraging transfer potential, retraining, and transferring knowledge but also through focused recruiting and outsourcing.
Statistics and Methodology

This report combines insights derived from BCG’s case experience and inputs drawn from interviews and data analysis. We conducted 74 interviews with senior executives from a variety of countries and industries. We analyzed almost 600 HR measures from more than 330 companies in different industries and compiled a database of best practices in demographic risk management. (See Exhibit 1.)

We also assembled macroeconomic profiles according to country and industry. To clarify the demographic differences among our 16 focus countries, we present them by region: Europe (including Turkey and Russia along with France, Germany, Italy, Spain, and the U.K.), the Americas (Brazil, Canada, Mexico, and the U.S.), and Asia-Pacific (Australia, China, India, Japan, and South Korea). We follow the same structure for industry comparisons.

On the basis of country-level demographic data, we analyzed capacity and performance risks (arising from employee retirements and changes in performance as employees age, respectively) for each country and industry. The report provides an overview of the most important findings.

Exhibit 1. There Are a Significant Number of Best Practices Across Industries

<table>
<thead>
<tr>
<th>Industries</th>
<th>Best-practice examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>200</td>
</tr>
<tr>
<td>Health care</td>
<td>150</td>
</tr>
<tr>
<td>Real estate and business services</td>
<td>100</td>
</tr>
<tr>
<td>Financial services</td>
<td>50</td>
</tr>
<tr>
<td>Transportation and communications</td>
<td>0</td>
</tr>
<tr>
<td>Energy</td>
<td>0</td>
</tr>
<tr>
<td>Trade</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
</tr>
<tr>
<td>Public sector</td>
<td>0</td>
</tr>
<tr>
<td>Construction</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: BCG analysis.
Note: Companies facing capacity and performance risks; there were multiple answers from companies with more than one best practice.
After centuries of explosive growth, the world’s population growth is expected to grind to a halt by 2100, judging by statistical analyses of fertility and life expectancy for different regions.\(^1\)

Furthermore, over the next few decades, most of the growth will occur in developing countries, whose working populations are generally less educated than those in mature markets. (See Exhibit 2.) As population growth in mature markets slows significantly, the aging of the population accelerates.

These developments have crucial implications for society and organizations alike. The effects of falling birthrates and aging populations, exacerbated in several nations by rising debt levels, have already led to vigorous debate and government action. Multinational companies need to understand how the macro-demographic trends will play out in local markets.\(^2\)

---


### Exhibit 2. Many Developed Countries Will Experience Demographic Decline

<table>
<thead>
<tr>
<th>Country</th>
<th>2008 (millions)</th>
<th>CAGR 2008–2020 (%)</th>
<th>CAGR 2020–2030(^1) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>19</td>
<td>0.8</td>
<td>0.2</td>
</tr>
<tr>
<td>United States</td>
<td>160</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Mexico</td>
<td>46</td>
<td>1.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Brazil</td>
<td>100</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>31</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>France</td>
<td>28</td>
<td>0.1</td>
<td>–0.1</td>
</tr>
<tr>
<td>Germany</td>
<td>42</td>
<td>–0.1</td>
<td>–0.2</td>
</tr>
<tr>
<td>Spain</td>
<td>22</td>
<td>0.3</td>
<td>–1.2</td>
</tr>
<tr>
<td>Italy</td>
<td>25</td>
<td>0.1</td>
<td>–0.4</td>
</tr>
<tr>
<td>Turkey</td>
<td>26</td>
<td>1.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Russia</td>
<td>76</td>
<td>–0.7</td>
<td>–0.9</td>
</tr>
<tr>
<td>India</td>
<td>475</td>
<td>1.8</td>
<td>1.3</td>
</tr>
<tr>
<td>China</td>
<td>799</td>
<td>0.4</td>
<td>–0.2</td>
</tr>
<tr>
<td>South Korea</td>
<td>24</td>
<td>0.4</td>
<td>–0.5</td>
</tr>
<tr>
<td>Japan</td>
<td>65</td>
<td>–0.7</td>
<td>–0.7</td>
</tr>
<tr>
<td>Australia</td>
<td>11</td>
<td>0.9</td>
<td>0.4</td>
</tr>
</tbody>
</table>


\(^1\)The figures for 2030 assume the same participation rate by sex and age groups as the figures for 2020.
To help convey the complexities of the demographic challenge, this section explores demographics on both a regional and an industry level.

**Review of Regions**

Each region has its own demographic patterns and peculiarities. This section provides a glimpse of the most interesting trends in Europe, Asia-Pacific, and the Americas.

**Europe.** Europe’s relatively old population will become even older. (See Exhibit 3.) By 2020, the median age in the region will reach 40; in Germany and Italy, it will exceed 45. Consider Germany’s situation: by 2020, the number of people over 50 is projected to rise by 68 percent. One-quarter of Germany’s workforce will likely retire in the next 15 years. That threatens the availability of technical skills and is likely to lead to sharp declines in productivity and performance as retirees take their institutional knowledge with them.

Many European countries depend on immigration to sustain their working populations. In fact, in Eastern Europe—a popular region to outsource certain jobs to—emigration and low birthrates are already starting to shrink the population.

Age-related challenges are evident in policymaking in many European nations and in the European Commission itself. They were apparent in France in 2010, for example, when protesters demonstrated against changes in pension programs.

Turkey is the exception to the graying population trend: its median age is more than 15 years younger than Germany’s. The 50-to-64-year-old cohort makes up only 13 percent of Turkey’s working-age population, compared with almost 25 percent in Germany.

**Asia-Pacific.** The countries in this region are demographically diverse. In 2008, Japan had the oldest median age at 44.2, and India had the youngest at 24.4. (See Exhibit 4.) Japan’s population will grow from older to “ancient,” foreshadowing what countries such as Germany and Italy will be facing. Japan can provide instructive responses for other nations. For example, in 2006 Japan’s government raised the legal retirement age from 60 to 65. And companies are now free to retain employees for as long as they want to work. (See the sidebar “In Japan, the Future Has Already Arrived.”)

India, by contrast, resembles Turkey or Mexico demographically more than it does other Asian nations, with large numbers of people entering the labor market—
In Japan, the Future Has Already Arrived

Japan, with one of the world’s oldest populations, shows countries such as China and Germany what their demographic structures could look like in 2020 or 2030.

From 1980 to 2007, Japan’s public spending on pensions and health care for the elderly rose by 370 percent. The cost burden of a relatively large elderly population also falls on Japanese businesses: it shows up in the pensions and wage premiums they must pay to attract scarce younger workers. (Japan also has an employer-matched retirement-savings program similar to those found in the U.S.)

Indeed, Japanese companies are caught in a bind by the graying of the nation. They see lower productivity and further capacity constraints in the future, along with rising pension and wage costs. They can keep employees beyond the official retirement age of 65 to help close the capacity gap, but Japan’s pay-for-seniority work culture means that average costs per employee can be daunting. Businesses are responding in the following ways:

◊ Retaining Older Workers to Help Knowledge Transfer. At Kobe Steel, workers who reach retirement age can be rehired if they wish. The employees may be hired by member companies of the Kobe Steel Group, enabling the whole group to continue to benefit from veteran workers’ skills and abilities. The scheme helps transfer skills to younger workers and gives older employees a greater sense of fulfillment.

◊ Hiring Retired Workers to Fill Job Needs. Labor shortages are encouraging many of Japan’s small and midsize companies to hire disproportionate numbers of older workers. They also target this demographic in order to benefit from the work experience of mature employees. According to data from the Japanese government, smaller organizations use nearly six times more workers aged 65 and over than large businesses do—a practice that will likely be adopted more widely given Japan’s demographic challenges.

◊ Providing Career Incentives. NEC’s Lifetime Career Support program promotes attractive postretirement careers by giving employees opportunities to gather information and plan their future careers while still working at the company. When employees are 50 years old, they are eligible for training that includes personal financial planning; classes on work, family, and community themes; and coaching toward life goals. They are also given help with developing specific career plans. When they reach 55, they can participate in “life design” seminars in which they can study topics such as pension and severance benefits systems and possible extended employment.
more than 300 million through 2020. It may be challenging to provide a good education and jobs for all these young people. Despite India’s young workforce, the nation may face a shortage of engineers and other skilled professionals. Its educational system cannot produce qualified candidates fast enough to meet the country’s demand.

In China, the population is still expanding, but the government’s one-child-per-family policy will slow the growth of the workforce by 2020. China’s age structure will then resemble that of Europe, leading to population declines after 2030. Altogether, China faces considerable performance risks today and in the future. (See the sidebar “Is China Falling Behind India?”)

South Korea has its own unique demographic patterns, which reflect the delay of its baby boom until after the end of the Korean War. The working-age population will continue to grow through 2020, but the median age will rise sharply, suggesting a performance risk in the near term and a supply problem in the longer term.

The Americas. The focus countries in the Americas region display a large demographic divide between the North and the South. (See Exhibit 5.) By 2020, the projected median age in the North will reach 38.0 in the U.S. and 41.4 in Canada, similar to many Western European countries. To date, the northern countries have managed their demographic risks mainly through immigration. Since the 1960s, for example, Canada’s flow of immigrants has been based on a scoring system that aligns the talents of prospective immigrants with the needs of the local economy. Immigration policies have thus helped to stabilize demographic trends.

In contrast, Mexico and Brazil remain relatively young, with median ages for each below 30 in 2008 and projected to be below 34 in 2020, or closer to India’s profile. Although Brazil’s population growth is slowing, both Mexico and Brazil will be forced to integrate large numbers of young people into their labor markets—15 million and 20 million, respectively. Rather than facing capacity risks, both countries will face risks in the

<table>
<thead>
<tr>
<th>Is China Falling Behind India?</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s hard to imagine that Chinese employers will soon be hurting when many of the 6 million who graduate from college each year are finding it harder to get work. But in fact, demographics may mean that China eventually falls behind India as an economic engine.</td>
</tr>
<tr>
<td>China has achieved stunning annual increases (about 10 percent) in GDP partly through two forces: annual productivity increases above 8 percent and workforce growth as high as 2 percent per year. As China’s productivity growth slows and its workforce begins to shrink, its GDP growth is projected to abate to about 6 percent. (See the exhibit “As Workforce and Productivity Growth Slow in China, GDP Growth Will Also Decrease Dramatically.”)</td>
</tr>
<tr>
<td>The nation’s productivity gains will eventually reach the 1 to 3 percent range typical for an industrial country. Although economists are unsure when productivity will start to sag, predictions about the size of the workforce are reliable over the next decade. The nation’s one-child policy will halt workforce growth by 2020, and the working-age population will start to decline.</td>
</tr>
<tr>
<td>Today, the median age in China is 38, similar to that in the U.S. By 2020, it will reach 42—roughly the levels of France and Spain. The number of Chinese manufacturing workers aged 50 or older will more than double in the next 15 years. It doesn’t help that many Chinese graduates lack the skills and competencies needed by employers. And China’s rapid urbanization—massive migrations from rural areas—aggravates the nation’s demographic challenges.</td>
</tr>
<tr>
<td>China will have little flexibility in encouraging nonworking adults to enter the labor market. The country’s participation rate (the number of employed people as a proportion of the number of working-age people) is nearly 80 percent—the highest of our 16 focus countries.</td>
</tr>
<tr>
<td>China’s companies already have shortages of certain managers, engineers, technicians, and other skilled workers. With its National Medium- and Long-Term Talent Development Plan (2010–2020), the government is trying to address the gaps—for instance, by promoting vocational education, which can ease the pressure on universities and increase job opportunities for urban youth. And it has established overseas recruitment centers to find new senior managers for its elite state-owned enterprises.</td>
</tr>
<tr>
<td>By contrast, India has a comparable productivity profile but a much younger population. In 2010, just 7.5 percent</td>
</tr>
</tbody>
</table>
quality of education and skills among this rising young workforce.

As in Europe, worries about retirement security have pervaded the U.S. political landscape. Soaring budget deficits, longer life expectancy, and the high cost of living have prompted U.S. lawmakers to consider the politically unpopular notion of increasing the retirement age for federal employees. Lawmakers in at least ten states have voted to require many new government employees to work longer before retiring with a full pension, or have increased the penalties for early retirement.³

**Review of Industries**

Demographics vary by industry as well. The energy, education, and health care industries tend to have older workforces in most countries and regions, while certain industries, such as financial services and real estate and business services, skew younger. (See Exhibit 6.)

Whether the current numbers of older employees will lead to capacity crunches in the future depends on the estimated development of both the demand for and the supply of labor in each industry. Independent of specific industry growth, most countries will face slower growth in the supply of labor.

By comparing the different industries, it is possible to identify a significant aging trend across countries in sectors such as public administration, education, energy, and health care. In such sectors, employees between the ages of 50 and 64 already represent a significant portion of the overall workforce.

Exhibit 5. In the Americas, the North Is Already Old but the South Will Eventually Catch Up

Sources: National statistical institutes; Euromonitor International; BCG analysis.

Exhibit 6. Education, Energy, and Health Care Have High Levels of Older Employees, Particularly in Europe

Percentage of employees between 50 and 64 in 2008

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Industry</th>
<th>Manufacturing</th>
<th>Energy</th>
<th>Construction</th>
<th>Trade</th>
<th>Transportation and communications</th>
<th>Financial services</th>
<th>Real estate and business services</th>
<th>Public administration and defense</th>
<th>Education</th>
<th>Health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe</td>
<td>United Kingdom</td>
<td>27</td>
<td>22</td>
<td>25</td>
<td>21</td>
<td>26</td>
<td>14</td>
<td>24</td>
<td>26</td>
<td>30</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>France</td>
<td>23</td>
<td>30</td>
<td>19</td>
<td>19</td>
<td>24</td>
<td>28</td>
<td>28</td>
<td>27</td>
<td>22</td>
<td>35</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
<td>24</td>
<td>25</td>
<td>23</td>
<td>23</td>
<td>28</td>
<td>27</td>
<td>22</td>
<td>25</td>
<td>17</td>
<td>33</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
<td>22</td>
<td>24</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>23</td>
<td>17</td>
<td>26</td>
<td>27</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>19</td>
<td>36</td>
<td>18</td>
<td>19</td>
<td>25</td>
<td>24</td>
<td>17</td>
<td>33</td>
<td>38</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Russia</td>
<td>24</td>
<td>31</td>
<td>20</td>
<td>14</td>
<td>22</td>
<td>13</td>
<td>23</td>
<td>15</td>
<td>24</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>5</td>
<td>7</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Americas</td>
<td>Canada</td>
<td>27</td>
<td>32</td>
<td>25</td>
<td>22</td>
<td>28</td>
<td>25</td>
<td>25</td>
<td>29</td>
<td>30</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>United States</td>
<td>29</td>
<td>36</td>
<td>21</td>
<td>22</td>
<td>26</td>
<td>27</td>
<td>24</td>
<td>33</td>
<td>31</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>8</td>
<td>22</td>
<td>14</td>
<td>6</td>
<td>13</td>
<td>9</td>
<td>9</td>
<td>23</td>
<td>16</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>9</td>
<td>16</td>
<td>14</td>
<td>14</td>
<td>13</td>
<td>8</td>
<td>16</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>China</td>
<td>9</td>
<td>12</td>
<td>14</td>
<td>12</td>
<td>10</td>
<td>7</td>
<td>13</td>
<td>17</td>
<td>17</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Japan</td>
<td>29</td>
<td>30</td>
<td>35</td>
<td>29</td>
<td>35</td>
<td>29</td>
<td>35</td>
<td>30</td>
<td>31</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Korea</td>
<td>18</td>
<td>19</td>
<td>24</td>
<td>19</td>
<td>23</td>
<td>11</td>
<td>23</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Australia</td>
<td>24</td>
<td>27</td>
<td>22</td>
<td>19</td>
<td>30</td>
<td>18</td>
<td>23</td>
<td>25</td>
<td>32</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

Percentage of employees between 50 and 64 in 2008

Sources: National statistical institutes; BCG analysis.
Note: There were insufficient data available for India.
Focus on Strategic Workforce Planning

If it has been difficult in recent years for organizations to have the right employees with the right skills in the right places at the right times, it will become much more challenging in the years ahead.

Employers cannot fight the underlying demographic trends. But they can do more to manage their demographic risks. BCG has identified two categories of demographic risk: capacity risks, incurred primarily by employee retirements, and performance risks, resulting chiefly from changes in performance as employees age. (See Exhibit 7.)

While workforce capacity and performance risks certainly pose problems at macroeconomic levels, they can have much more detrimental effects on individual organizations. Talent shortfalls, especially of highly skilled workers, can significantly stunt a company’s growth or hurt competitiveness and profitability.

A few farsighted companies know this and are responding accordingly. Deutsche Telekom has implemented a comprehensive strategic workforce plan that starts with detailed segmentation studies of its staff and ends with proactive responses based on close collaboration between HR and the business units.

Unfortunately, those types of responses are not the norm. Many companies lack the processes necessary to gather information on the age structure of their workforce. According to BCG’s 2010 report Creating People Advantage 2010: How Companies Can Adapt Their HR Practices for Volatile Times, only 9 percent of companies deploy a sophisticated workforce supply-and-demand model and plan their workforce needs more than three years in advance. Only a minority can confidently say where their older workers are concentrated or how likely it is that their organizations will soon face a wave of retirements. In many workplaces, there is no clarity about where older workers’ attributes are most beneficial and where they may be less suitable.

At the same time, many employers continue to operate on old assumptions and prejudices. Even though some


Exhibit 7. Demographic Trends Impose Two Threats: Capacity Risks and Performance Risks

Challenges for management

- Mitigating capacity risk
  - Current workforce
  - Outside resources
- Mitigating performance risk
  - Outside resources

- Retention
- Transfer potential
- Retraining
- Knowledge transfer
- Recruiting
- Outsourcing, offshoring, inshoring

Addressing medical and physical issues
Improving motivation and mental productivity
Adjusting shift and time schedules
Offering job changes

Demographic risks need to be assessed and managed

Source: BCG analysis.
older workers may indeed be less productive in jobs that involve a lot of physical work, managers are prone to making gut-level, across-the-board judgments that ignore the facts about the value and availability of skilled older workers. In many cases, older workers are actually a perfect match for what employers say they want: employees who can hit the ground running, can comfortably handle everyday workplace problems, don’t seek long-term commitments from the company, and are motivated and self-managing.

Furthermore, few companies are even close to the kinds of responses needed to cope with demographic risks in the workplace. And fewer still have a sense that active management of demographic risk can improve financial performance. (See the sidebar “Addressing Demographic Risk Can Boost Earnings.”)

In BCG’s experience, the appropriate defense is to assess both capacity and performance risks at regular intervals and to make strategic workforce planning an essential part of the organization’s suite of best practices. (See Exhibit 8.)

We suggest that companies take a six-step approach to strategic workforce planning. The first four steps address the derivation and prioritization of appropriate measures needed for the fifth step: the responses required to mitigate capacity risk and performance risk. The sixth step ensures that the measures and responses are sustainable—that they continually generate business value.

1. Develop a hierarchical job-family taxonomy—a logical framework to segment employees in skill clusters based on required skills and experience.

2. Simulate future workforce supply, taking into account factors such as attrition rates and retirement age in order to understand where and when significant losses of employees—and large waves of aging employees—can be expected.

3. Forecast workforce demand to determine how business strategy and underlying assumptions will influence the future need for employees differentiated by job families.

4. Assess the resulting gaps by contrasting the projected supply of workers with the expected demand under different business scenarios.

5. Develop specific responses to close the gaps—for example, identifying where to recruit, where to cross-train, where to transfer, and where to lay off.

6. Establish a continuous process for strategic workforce planning, tightly linked at all times to the strategic business-planning process.

The outcomes of this six-step approach help organizations manage the risks of underperforming because of personnel constraints. Those risks are significant and widespread: according to BCG’s worldwide People Advantage study, which analyzed the responses of more than 5,500 participants, only 15 percent of companies analyze workforce supply scenarios, only 9 percent have a strategic demand simulation in place, and just 6 percent derive their HR measures from strategic workforce planning.

**Addressing Demographic Risk Can Boost Earnings**

Managing demographic risk makes good financial and business sense, as one energy company discovered. At one of its cogeneration plants, the company was facing the retirement of older employees who ran the incinerators. These units ran most efficiently through the execution of several unwritten, hands-on practices learned on the job. For example, the sequence of materials being incinerated had dramatic effects on efficiency.

The company decided to prevent the loss of knowledge by teaming an experienced employee who was close to retirement with his replacement. Analysis revealed that the extra staffing cost would be negligible compared with the cost of incinerator downtime caused by inexperienced workers. The company took similar measures to address the productivity of maintenance workers, which also helped reduce plant downtime.

By reducing the loss of knowledge and taking other measures to improve the productivity of older employees, the company was able to increase annual earnings before interest and taxes by 3 percent.


6. “Upsetting the Natural Order: Managing Employees Old Enough to Be Your Parents,” Knowledge@Wharton, September 1, 2010.
Below we will examine the first four steps—the ones needed to develop the appropriate measures. Then we will look closely at the development of specific responses, both for mitigating capacity risk and for dealing with performance risk.

**A Systematic Approach**

To develop the measures required for dealing with capacity and performance risks, business leaders must adopt a systematic approach that starts with creating a taxonomy of job families, moves on to simulating the future supply of employees, forecasts demand for the job categories defined, and assesses the gaps between supply and demand.

**Developing a Job Family Taxonomy**

The first step is to segment the employee population, much as the marketing function segments customers and prospects. Start by segmenting jobs across the organization. A systematic job taxonomy uses a treelike structure to classify jobs by the skills and experience required to perform a task and by how easily workers can be shifted among tasks.

Each branch of the job tree should show the time typically needed to qualify and transfer employees—that is, the time it takes to train employees so they can perform at or very close to the levels of longtime employees in the same roles. The tree structure demonstrates the ease with which workers can be moved among positions. This approach distinguishes three levels that imply three different sets of measures for HR management: job functions, job families, and job family groups. (See Exhibit 9.)

- **Job functions** comprise jobs that are essentially the same. At most, three months of training would be needed to reliably rotate employees who share the same job function.
- **Job families** comprise job functions that call for related but somewhat different skills. It can take up to 18
months before employees are ready for intrafamily transfers.

- **Job family groups** comprise similar job families. Successful moves between job families within the same job group may take up to three years. This dimension puts the spotlight on career paths and requires a well-planned set of measures from HR management.

A large global manufacturer of commercial vehicles followed these principles after seeing how an imminent wave of retirements threatened to deplete its specialized technical skills and deep customer knowledge. (See the sidebar “The Key to Knowledge at a Major Truck Manufacturer.”) And Deutsche Post DHL is using strategic workforce planning to help its two core businesses uncover the root causes of their problems and show business leaders how they can confront the challenges of demographic risk. (See the sidebar “Deutsche Post DHL: Using Strategic Workforce Planning to Tackle Parallel Challenges.”)

Of course, job taxonomies require a well-coordinated effort between line managers and the HR department to categorize jobs on the basis of their interchangeability and to set up a taxonomy that adds real value. If job functions and job families are defined too broadly (“any worker will do”) or too finely (“every worker is unique”), it is very difficult to develop an effective job taxonomy.

### Simulating Future Workforce Supply

The next part of the puzzle is about where tomorrow’s workers will come from. HR leaders can get a good sense of their future supply, categorized by job function and site or organizational unit. To do so, they should scrutinize the patterns of age distribution in the current workforce and make reasoned assumptions about regular and phased retirement, voluntary attrition of employees, historical levels of departures, and so on. The quantitative projection model and its underlying logic will be essentially the same for any company, irrespective of industry, but the parameters will obviously depend on company specifics.

The second step—making realistic projections of supply and age structures—confirms that past is not necessarily precedent. Historical patterns of retirement are valuable, of course, but they must be paired with management discussions of future trends in order to derive several different supply scenarios. And they must look out well beyond businesses’ conventional three-year planning horizons.

---

**Exhibit 9. Companies Should Categorize Jobs by Typical Tasks and by How Interchangeable Jobs Are**

<table>
<thead>
<tr>
<th>Job Family Group</th>
<th>Requalification Possible within</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrician</td>
<td>36 months</td>
</tr>
<tr>
<td>Maintenance</td>
<td>18 months</td>
</tr>
<tr>
<td>Operations</td>
<td>3 months</td>
</tr>
</tbody>
</table>

**Source:** BCG analysis.
When employees retire, crucial knowledge can disappear. Several years ago, a leading North American truck manufacturer saw that an upcoming wave of retirements threatened the specialized technical skills and deep knowledge about customer needs that helped the company produce customized trucks. Several rounds of layoffs, voluntary severance programs, and limited external recruiting had created a relatively senior workforce; in certain areas, one-third to one-half of the employees would be eligible for retirement within four years.

The truck maker began assessing the extent and severity of this demographic risk by focusing on employees it deemed to be key knowledge holders—workers who had specialized technical or process knowledge, or important supplier or customer relationships. To do this, the company used an in-depth survey of 5,000 employees across all areas of the business, which led to classification by the type of knowledge the workers held. Roughly 20 percent emerged as key knowledge holders, including 9 percent highlighted as unique key knowledge holders. One-third of the unique key knowledge holders were expected to retire within five years, although the share was much higher in some functions.

The company then set up targeted knowledge-management systems, tandem staffing arrangements, job rotations, and other methods of capturing knowledge from these employees before they retired.

Forecasting Workforce Demand
Knowing how the supply of employees will unfold is valuable in itself, of course, but it is only half the story. To acquire a complete grasp of the impact of demographics, it’s essential to develop a detailed forecast of workforce demand. Only by comparing supply-and-demand scenarios at the job family level can HR leaders identify, prioritize, and tackle their companies’ talent gaps.

The demand model is designed to reflect what the future workforce must look like in order to satisfy the company’s strategic road map. There might be significant changes in the required skill set because of new technologies, productivity improvements, or different outsourcing and insourcing strategies.

In Australia, SkillsDMC National Industry Skills Council offers a good example of workforce demand forecasting on a country level. The nonprofit, which serves the skill-building needs of the nation’s resource and infrastructure industries, has launched a workforce-planning project for Australia’s coal industry. The project involves developing a model that forecasts the demand for labor by each occupation, state, and type of mine as far out as 2015 and 2016. The model assesses the impact of workforce aging on labor supply; it also includes the formulation of a separate workforce-planning tool, which can be used by mine operators to estimate their workforce needs.

The building of an appropriate demand model requires a deep understanding of the business strategy and its underlying drivers as well as a profound knowledge of HR issues so that the demand model can be translated into workforce demand. Moreover, in contrast to supply models, demand models are highly specific to the industry and the company. As a first step, HR leaders must work closely with business leaders and strategy experts across the organization in order to identify key demand drivers and the relevant mechanisms by which they will influence demand for personnel, taking into account the current business model and any anticipated changes in it. It is crucial to develop individual driver trees in order to have the flexibility to understand the impact of different strategic scenarios. Integral to that exercise will also be a reevaluation of all assumptions about business forces, such as new technologies, production scenarios, product mix, and productivities; everything must be re-
Deutsche Post DHL is the world’s leading mail and logistics services group. Its two corporate brands represent a portfolio of logistics (DHL) and communications (Deutsche Post) services.

Two business units within Deutsche Post DHL serve quite different markets and face different workforce challenges. Strategic workforce planning has helped both businesses uncover the root causes of their problems and has revealed how business leaders can confront the challenges of demographic risk. “I strongly believe that this methodology will help HR to create benefit for our business—for example, enabling us to plan workforce demand in alignment with business strategy, to simulate the HR implications of key business scenarios, and to identify shortfalls in critical skill clusters,” comments Jörg Seufert, executive vice president, HR Standards and Guidelines at Deutsche Post DHL.

Like postal service providers in many regions, Deutsche Post is facing shrinking mail volumes as digital communications expand. Its workforce in Germany is relatively old (an average age of 44) and homogeneous, and a substantial percentage of the workforce is covered by civil service contracts.

For its part, the company’s DHL Freight business in Germany faces a different workforce issue. With ambitions to grow its Germany-based road-freight business by focusing on international products, DHL Freight Germany realized that its current workforce was being challenged by the expansion plan. It has a young workforce (average age 37) with a relatively high attrition rate.

In both cases, Deutsche Post DHL decided to use the strategic-workforce-planning (SWP) concept to identify how workforce risks will develop in light of demographic risk and as market demand changes. The results show that although all areas of a company are affected by demographic shifts, the effects can differ strongly depending on site, segment, and qualification group.

Deutsche Post DHL carried out a differentiated risk assessment in five steps. To begin with, employees were divided into job functions, which allowed different tasks and requirements to be grouped on the basis of how interchangeable those groups of workers were. Second, IT-based simulation models helped in analyzing and forecasting the development of workforce supply and workforce age structures, taking into account parameters such as retirement age, attrition, and sickness rates among defined job functions.

Other computer simulations enabled Deutsche Post DHL to forecast workforce demand, using a sophisticated demand-driver model including factors such as future business strategy and product growth or decline in different scenarios. Fourth, a risk analysis step gauged the alignment of workforce demand and supply, allowing staff surpluses and shortages to be analyzed from regional (site) and functional (job functions) perspectives. Last, the company identified and prioritized key HR measures on the basis of their complexity and effectiveness.

The SWP approach enabled Deutsche Post DHL to better understand and plan for tomorrow’s HR challenges. With 30 percent of its internal finance and HR operations service provider’s workforce due to retire or leave the company over the next ten years, the provider found that it was exposed to severe shortages of certain highly critical expert and management functions in several departments, despite the projected decline in demand. Its two-pronged response: individual career development for existing talent as well as selective hiring of staff with different skill sets. Further, those new hires would be trained for critical functions that could not be filled by retraining current staff or by hiring readily in conventional labor markets.

Meanwhile, at DHL Freight Germany, the SWP exercise revealed that the logistics provider would need flexible employees with a skill set supporting international growth. Just one example: when a truck drove from country to country, dispatchers would need to speak English as well as the language of at least one of the countries in question.

Moreover, DHL Freight Germany has to prepare to fill the very large knowledge gaps that will be caused by high attrition rates and demographic effects in certain critical job areas. As a result, the company defined several targeted HR initiatives as part of its overall HR road map. Some of those initiatives are designed to help improve DHL’s recruiting processes in sync with the provider’s growth objectives. Others emphasize the development and training of current employees and a sharper focus on engagement in the operations areas and job functions where a knowledge drain would have particularly damaging effects.
viewed against the organization’s strategic agenda. (See Exhibit 11.)

With all influencing factors accounted for, HR leaders can now build “what if” scenarios and probe the assumptions behind them. The more volatile the industry, the more important it is to use a variety of scenarios to show a realistic spectrum of possible developments affecting the industry and the company. The scenarios lead to best-case as well as worst-case assessments of workforce demand simulation by job family.

**Assessing Capacity Gaps**

With models of the supply of and demand for employees broken down into job families, the organization can now gauge its capacity risks. The new data sets allow managers to pinpoint labor shortfalls and surpluses by job category and organizational unit at any point in time—and for different supply-and-demand scenarios. Exhibit 12 illustrates the outcome of a typical gap analysis. The blue boxes indicate that a labor surplus is expected in 2021—supply will outstrip demand. But the red boxes draw immediate attention to the undersupply of mechanical engineers, for example. The capacity risks are obvious.

The gap analysis can help pinpoint what we call “robust gaps”—gaps that occur in many different scenarios, including the best and worst cases. It can expose talent shortfalls even in situations where there is diminishing demand for a particular skill. And it can help point out the “no regret” measures that employers can take to produce gains with minimal downside risk.

When leading companies start to look for ways to blunt such risks, they examine them from two sides. They look at the extent of the internal capacity risk (determining how labor shortfalls develop over time) and its immediacy (examining how soon shortages will arise). And they study how hard it will be to fill workplace gaps—a function not only of the availability of skilled workers but also of the intensity of competition for them.

An essential part of the capacity assessment effort is the identification of critical job functions. Nowhere is this more important than for jobs that require years of preparation, training, education, or internal experience. (See Exhibit 13.) For some roles—that of a specialized technician helping to operate power plants in the energy sector, for instance—it can take seven years to qualify. The im-
Specific Responses

Armed with data about future workforce supply and demand and the gaps between them for various jobs, business leaders can begin to tailor their responses accordingly. BCG has found that there are practical responses to capacity risk issues and another set of responses best suited to performance risk.

Developing Specific Responses for Capacity Risk

The mitigation of capacity risks involves a range of responses—from development of a taxonomy of job families to forecasts of workforce demand and assessments of gaps in capacity. So what does it take to manage and mitigate capacity risks by job family? There are two parts to the answer: targeting the current workforce and influencing its development, and evaluating available labor pools and their impact.

Responses for the Current Workforce. As a rule, it is preferable, in terms of cost and speed, to emphasize the targeting of the current workforce. The emphasis must include retraining, redeployment, and retention programs to lower attrition rates, and knowledge-capture and transfer projects to compensate for retirements and other forms of exit. Let’s look first at what can be done with the existing workforce.

Four areas merit attention: retention, transfer potential, retraining, and knowledge transfer.

Retention. Easily the best way to avoid capacity shortfalls is to improve employee retention. Productive employees are intimately familiar with processes and workflows, and they are part of the corporate culture. Successful retention programs are tailored to workers in the jobs most vulnerable to talent shortages. And when those programs form part of a coherent strategic-workforce-management approach, they help prevent the hasty rounds of layoffs that are typical of organizations that put short-term financial goals ahead of long-term workforce-capacity needs.
Leading practitioners mount several types of response. Some offer financial rewards, such as the U.S. health-care provider that gives college scholarships to employees’ children and grandchildren. Others provide non-monetary benefits. To combat high turnover rates in a tight labor market, a Romanian bank introduced an array of initiatives that generated excitement among employees: favorable banking terms, a career track for “high potential” employees, and more responsibility for managers to actively develop the careers of their people. In three months, the bank saw attrition rates fall by 30 percent.

Transfer Potential. Another useful technique is to redeploy workers where they are needed most. In larger organizations, it is common to find shortages of, say, quality control engineers. A traditional approach might be to hire new workers. But by redeploying internal workers, a company can maximize the potential of its existing workforce. Consider the situation at a toy company in Germany, which faced a shortage in its production line. Instead of hiring new production controllers, the company transferred existing employees to the line to fill the gap. By leveraging internal talent, the company was able to avoid the high costs associated with hiring and training new employees. In fact, few companies have the resources or capacity to hire large numbers of new workers in times of scarcity. Instead, companies need to focus on transferring workers within the organization to fill critical gaps.”

Exhibit 12. Companies Must Ensure That They Have All the Employees They Need—with the Right Qualifications

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Refinishing worker</td>
<td>242</td>
<td>37</td>
<td>32</td>
<td>−31</td>
<td>−61</td>
<td>−76</td>
<td>−79</td>
<td>−74</td>
<td>−194</td>
</tr>
<tr>
<td>Logistics expert</td>
<td>407</td>
<td>34</td>
<td>45</td>
<td>41</td>
<td>−59</td>
<td>−65</td>
<td>−92</td>
<td>−96</td>
<td>−130</td>
</tr>
<tr>
<td>Machine supervisor</td>
<td>397</td>
<td>58</td>
<td>1,353</td>
<td>59</td>
<td>46</td>
<td>−112</td>
<td>−156</td>
<td>−216</td>
<td>−204</td>
</tr>
<tr>
<td>Production controller</td>
<td>799</td>
<td>104</td>
<td>101</td>
<td>80</td>
<td>−237</td>
<td>−202</td>
<td>−159</td>
<td>−114</td>
<td>−100</td>
</tr>
<tr>
<td>Mechanical designer</td>
<td>286</td>
<td>0</td>
<td>23</td>
<td>20</td>
<td>0</td>
<td>−24</td>
<td>−28</td>
<td>−32</td>
<td>−36</td>
</tr>
<tr>
<td>Safety supervisor</td>
<td>190</td>
<td>16</td>
<td>9</td>
<td>0</td>
<td>3</td>
<td>8</td>
<td>13</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Quality supervisor</td>
<td>581</td>
<td>−136</td>
<td>−124</td>
<td>−127</td>
<td>−113</td>
<td>−123</td>
<td>−123</td>
<td>−145</td>
<td>−185</td>
</tr>
<tr>
<td>Technical worker</td>
<td>853</td>
<td>118</td>
<td>120</td>
<td>123</td>
<td>63</td>
<td>41</td>
<td>20</td>
<td>6</td>
<td>−25</td>
</tr>
<tr>
<td>Electrical engineer</td>
<td>352</td>
<td>−66</td>
<td>−102</td>
<td>−98</td>
<td>−94</td>
<td>−140</td>
<td>−126</td>
<td>−119</td>
<td>−112</td>
</tr>
<tr>
<td>Machine operator</td>
<td>465</td>
<td>−46</td>
<td>−73</td>
<td>−95</td>
<td>−73</td>
<td>−54</td>
<td>−41</td>
<td>−30</td>
<td>−21</td>
</tr>
<tr>
<td>Assembler/prefabrication technician</td>
<td>711</td>
<td>119</td>
<td>110</td>
<td>86</td>
<td>−271</td>
<td>−179</td>
<td>−77</td>
<td>−17</td>
<td>−16</td>
</tr>
<tr>
<td>Mechanical engineer</td>
<td>574</td>
<td>−57</td>
<td>−55</td>
<td>−53</td>
<td>−219</td>
<td>−381</td>
<td>−440</td>
<td>−414</td>
<td>−664</td>
</tr>
<tr>
<td>Production IT expert</td>
<td>288</td>
<td>−18</td>
<td>−66</td>
<td>−85</td>
<td>−210</td>
<td>−207</td>
<td>−249</td>
<td>−384</td>
<td>−363</td>
</tr>
<tr>
<td>Commercial clerk</td>
<td>453</td>
<td>49</td>
<td>67</td>
<td>−47</td>
<td>−45</td>
<td>−43</td>
<td>−40</td>
<td>−38</td>
<td>−32</td>
</tr>
<tr>
<td>Molding specialist</td>
<td>1,256</td>
<td>135</td>
<td>140</td>
<td>116</td>
<td>83</td>
<td>−22</td>
<td>−111</td>
<td>−193</td>
<td>−297</td>
</tr>
<tr>
<td>Planning engineer</td>
<td>771</td>
<td>70</td>
<td>74</td>
<td>21</td>
<td>−131</td>
<td>−124</td>
<td>−144</td>
<td>−145</td>
<td>−145</td>
</tr>
<tr>
<td>...</td>
<td>1,642</td>
<td>122</td>
<td>220</td>
<td>211</td>
<td>108</td>
<td>115</td>
<td>171</td>
<td>214</td>
<td>225</td>
</tr>
<tr>
<td>...</td>
<td>430</td>
<td>−13</td>
<td>−13</td>
<td>49</td>
<td>53</td>
<td>−4</td>
<td>−7</td>
<td>−3</td>
<td>−42</td>
</tr>
<tr>
<td>Total FTEs</td>
<td>10,697</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BCG analysis.

Note: Figures reflect anticipated shortfalls and surpluses in jobs; this is an illustrative rather than an actual example.
trol engineers at one site or in one division and surpluses of the same positions elsewhere in the organization. Properly executed, with all the right inputs, a workforce gap analysis will quickly spot this anomaly.

However, although the necessary transfers may make sense in theory, putting them into practice can be a different story. Employees may be reluctant to move; incentives and relocation packages may be ad hoc or inadequate. So the more information available about potential transfers up front, the better. The structured job taxonomy that groups similar positions helps managers understand their employees’ transfer potential. And the more long-term the view of potential capacity risks, the better. Companies should know about transfer opportunities far enough in advance to prepare employees to accept one.

Retraining. Of course, it is often possible to fill capacity gaps by retraining staff. Much as there can be geographical variation in gaps in supply and demand, there can often be shortages of one job function and oversupplies of others, and retraining may help to close the gap.

Again, a long-term view is important because many jobs require years of training and education. Having a sophisticated job taxonomy on hand is invaluable for planning and execution. The taxonomy shows jobs with transportable skills and the potential training efforts required.

A European utility has successfully used retraining to improve the liquidity of its labor markets. Categorizing its employees by job function, family, and group, the company was able to identify opportunities to add and retrain employees in its power-plant and engineering operations. With minimal training, a high-voltage electrician working on equipment can take on high-voltage tasks at a power plant, and vice versa.

Knowledge Transfer. Farsighted companies are well aware of the knowledge lost when workers retire, quit, or move internally. So they try to manage the loss in a variety of ways—transferring or at least capturing knowledge through IT-based systems or simple face-to-face business processes. At one of Alcoa’s large business units, for example, a knowledge retention strategy was designed to shed light on the relationship between the organization’s operational and organizational needs and the potential impact of the knowledge lost as employees retired.

A large manufacturer of chemicals tries to ensure smooth knowledge transfer when employees leave their jobs. The company launched its HR program to address demographic risks and sustain its productivity and innovativeness. Lifelong learning is a cornerstone of the program.
Not only does the chemical maker help employees invest in career development regardless of their age, but it also actively captures and carries forward the knowledge of retiring employees.

**Responses for Outside Resources.** If workforce shortfalls and surpluses persist after all practical avenues have been explored within the organization, it is time to turn outside. Two areas are important here: recruiting and outsourcing (particularly offshoring).

**Recruiting.** Recruiting is a primary way of closing anticipated gaps in the workforce. By identifying those gaps early on, companies can develop highly focused recruiting strategies. Although this has not been a top priority for many companies, some farsighted organizations practice strategic recruiting—regularly recruiting before there is an actual vacancy.

Companies that have a strategic and focused approach to recruiting continually apply a range of actions to ensure that they keep the pipelines of qualified candidates flowing. Here are a few:

- **They invest in visibility.** Leading players know that when they target traditional recruiting pools, their corporate reputation and ability to build and maintain strong relationships with potential candidates are of the utmost importance. So they work hard to build robust “employer brands,” investing in high-visibility campaigns at colleges and in venues where they can present unique value propositions to well-qualified candidates.

- **They “fish” in quieter labor pools.** In most of the countries BCG studied, the actual employment-participation rate—the number of employed people as a proportion of the number of working-age people—is only about 60 to 70 percent, meaning that as many as 30 to 40 percent of the pool of working-age people are potential workers. Farsighted companies don’t hesitate to explore those opportunities. They may hire (or rehire) retirees, pursue top students at second- or third-tier universities or within particular immigrant groups, or reach out to the unemployed. Another tactic: recruiting women in nations where women are underrepresented in the working population.

- **They refine their hiring processes.** Leading organizations push the boundaries of their recruiting processes—for example, by finding creative ways to boost the value of employee referrals. Another approach—one that is common in the telecommunications sector—is the use of mergers and acquisitions as a strategic recruiting tool. This strategy enables companies not only to expand in new markets or quickly gain scale and size but also to gain access to new employees without the need to hire or retrain.

Leading companies are coming up with imaginative responses to their recruitment challenges. For instance, Fahrion Engineering, a German firm, has identified engineers older than 50 as a favorable recruiting pool. Recent graduates did not have enough experience, and engineers in their prime were too expensive. But older engineers had experience and were in less demand than their younger peers. Fahrion received 500 responses to an ad for four open positions and hired 25 of the applicants.

Also in Germany, a bank has put an unusual twist on a youth training program. It has been training older unemployed people to become call center service personnel. The productivity of these employees is nearly that of younger ones, and they are willing to work more flexible hours. Since some employees see this job as their last chance to reenter the labor force, they approach their tasks with higher motivation and dedication.

In Japan, a confectioner is challenging conventional ideas about maternity leave by enabling women to leave to raise a family and return to the same job as much as seven years later. In Sweden, a building company hires construction workers with injuries and disabilities and trains them to work in the industry again. The Swedish government subsidizes the workers’ wages for the first four years, but many of them find permanent jobs before the subsidy ends.

And a European manufacturer is using creative ways to fill positions that it would not otherwise be able to fill. For example, it is recruiting and training dental technicians to make up for a shortage of industrial mechanics.

Outsourcing/Offshoring. For many companies, outsourcing—particularly offshoring—is seen largely as a cost-cutting strategy for handling noncore activities. But it can also be used to help balance workforce demand for core activities. The challenge, though, is that outsourcing can achieve those ends only in the short term; outsourcers themselves are likely to face the same workforce-capacity shortages. Chinese manufacturers, for instance, have begun to feel a labor capacity pinch, forcing them to raise wages. Furthermore, outsourcing, managed properly, cannot really be used as a kind of “on demand” resource; many studies point to the value of long-term strategic relationships with third-party providers of outsourcing services.8

Developing Specific Responses for Performance Risk

The proposals for mitigating performance risks are very similar to those for mitigating capacity risks. The emphasis is on managing the challenges of employing older workers whose performance may be compromised by age-related physical limitations or perhaps by lack of familiarity with information technology.

It is important to state at the outset that the analysis of performance risk must carry no inherent bias against older employees in general. Many studies demonstrate that experience is frequently an asset. And other research points to higher levels of engagement among older employees.9 For some jobs, productivity might indeed decrease with age as a function of health—especially for those that require significant physical effort. Studies show that cognitive functions, such as perceptual speed and reasoning, do start to decline—which is why physical deterioration begins much earlier in life.10 The objective, then, is to identify the roles most affected by declining performance and to isolate the reasons for the declines. The eventual goal is to develop measures that can help amplify older workers’ strengths and offset their weaknesses.

Many leading companies are actively pursuing programs to offset performance risk. With the assistance of its employees, Abbott, a health care corporation employing about 65,000 people worldwide, recently developed a job-sharing program that helps its older workers in Europe, Japan, and the U.S. to stay on the job longer and more easily achieve a satisfactory work-life balance. The Dow Chemical Company has programs for “career deceleration” that allow older workers to move into less intense positions, such as those that involve mentoring younger workers or teaching courses. Dow’s program allows older workers who may be required by government regulations to retire from a particular job to move into different positions rather than leave the company.

There are several key categories of response to performance risk: addressing medical and physical issues, improving motivation and mental productivity, adjusting shift and time schedules, and offering job changes.

Addressing Medical and Physical Issues. The general perception may be that older employees are ill more often than their younger colleagues—and are typically out sick for longer. There is considerable debate about that perception.11 In any case, the issue must be tackled proactively, not only through carefully crafted preventive programs to encourage personal health and fitness but also through assertive measures to step up workplace safety.

Some companies emphasize health care initiatives. A German transportation company faced a shortage of drivers; many drivers were frequently sick and they often retired early. So the company offered additional vacation time and unpaid days off to drivers who provided evidence that they exercised at least three hours a week. The program helped cut sick days by 50 percent. As a consequence, employees now have more vacation time and they go to work more regularly.

Another thing to consider: workplace designs that more easily accommodate older workers. This may involve adjustments to seating or lighting, or modifications to work routines—for instance, rotating tasks to vary physical activity during the workday.

There are many examples of creative responses. BMW has gone to some lengths to reconfigure assembly lines to

suit its older workers. The company’s analysis discovered that many of those workers suffered from weak backs. So BMW introduced a mobile training station to help employees exercise their back muscles. The employees who participated in the program increased their back strength by 14 percent and became more productive as a result. BMW has recently taken other measures to restore the productivity of its older workers—for example, adding seats on assembly lines, installing magnifying glasses for smaller tasks, and increasing font sizes on computer displays.

Improving Motivation and Mental Productivity. Although older employees are more experienced, their technical or topical knowledge may be a bit dated. In such situations, training that leverages the workers’ experience can help. But it cannot be one-size-fits-all—and it must not make older workers feel as if they are doing remedial work. It is best to create a situation in which employees and employer agree that training pays off for both parties. In sectors where change is a constant, such as high technology, continual on-the-job training keeps employees’ skills sharp—ensuring that the average age of the workforce tends to be relatively high.

For some job families, it can also be challenging to keep older employees motivated—and to prevent them from feeling as if they have been put out to pasture. Leading employers are careful to offer older workers many of the same types of advancement and education opportunities offered to younger employees. For example, a large health-care provider tries to ensure that its training of older workers is appropriate. A tailored retention program ensures that all employees aged 55 and over are eligible for tuition reimbursement benefits and an in-house MBA program, among other benefits tailored to that cohort.

German retail chain Galeria Kaufhof has gone even further to uphold the mental and physical fitness of its mature workers: the company has appointed a “demography officer” whose focus is on active and holistic health management that covers social interaction and mental well-being as well as physical fitness. The services offered range from ergonomics and healthy eating to addiction prevention and protecting nonsmokers from secondary smoke inhalation.

Companies also find ways to involve older employees in creating the corporate culture. Those organizations continually signal to their older workers that they are valuable contributors—not only in their work roles but also as mentors, role models, knowledge brokers, and more. A large U.S. family-entertainment company has assembled a dedicated team of employees aged 55 or older to help their age cohort derive more satisfaction from their jobs. These individuals are selected annually to provide leadership, guidance, and advice; to help employees “learn the ropes”; and to offer suggestions, concerns, and ideas to HR.

Adjusting Shift and Time Schedules. In general, adjusting shift and time schedules according to the results of ergonomic analyses may help to boost productivity. Flexible schedules for older employees—part-time work, for instance—can further increase their commitment, motivation, and productivity. That was the case at an Austrian manufacturer where employees complained of sleep problems and not enough free time on weekends. The company reduced night shift work for those over 50. The incidence of illness has dropped by 15 percent, while productivity and morale have improved.

Offering Job Changes. Where workplaces that require physical effort cannot be redesigned for older or less able employees, it makes sense to offer them jobs that are physically less demanding. This becomes more important the stricter the pertinent labor-protection laws are. But regulations should not be the only consideration when taking this step; it is important that workers not feel as if they are being “shunted” to their new jobs.

A European car manufacturer enlisted doctors to create profiles of the tasks best suited to each of the physically challenged employees in one manufacturing area where absenteeism and low morale were rife. The profiles helped the carmaker match half of those workers with more appropriate production-line roles; another 40 percent moved to jobs with fewer hours or that were less physically taxing. Productivity rose and absenteeism dropped as a result.

any business leaders now hear the demographic clock ticking in their workplaces. (See the sidebar “Seven Ideas for Closing the Talent Gap.”) But demographic factors apply to every employer everywhere. HR leaders who fail to recognize this are doing their organizations a disservice.

Moreover, chief executives who do not hold their HR leaders accountable for demographic risk are failing their shareholders. The demographic challenge is not something to be dealt with in the distant future. It is real and it is immediate.

Here are a few questions that should be on the agenda of the next management meeting:

- Can we identify critical skills within the organization?

- Can we map our workforce into job families on the basis of how easy it is to exchange jobs?

- What is our strategy for maximizing retention? To what extent are our retention programs tailored to the employees in the jobs that are most vulnerable to talent shortages?

- What is our strategy for recruiting? Do we know exactly whom to recruit, how to recruit, and how many to recruit?

- Do we know how our current workforce will develop over the next ten years, judging by attrition rates, retirement, and other factors?

- Can we differentiate job families and locations, and prioritize critical areas of demographic risk?

- Do we understand how different job families are affected (positively and negatively) by aging?

- Can we project our workforce demand by job family and location for the next ten years?

- Do we understand the impact on our workforce of different strategic business scenarios and business initiatives?

- Do we understand the strategic supply-and-demand gaps so that we can fully leverage existing employees and consider job transfers before going outside to hire?

- Do we know who our key knowledge workers are? Have we set up a professional knowledge-management system?

- Do we derive HR measures systematically from the strategic big picture rather than in ad hoc ways?

- Do we track and continually underscore the success of our HR implementations? Do we measure their impact on an ongoing basis?

- Can we say who “owns” our workforce-planning process? Is the process tightly linked to our HR strategy? To our overall business strategy?

- Do we have the tools, metrics, and qualifications that are necessary to rigorously manage strategic workforce planning?
The talent gap is a challenge for employers everywhere—and a very real threat to economic growth worldwide. According to a World Economic Forum report developed in collaboration with BCG, in less than a decade many nations will have substantial shortfalls in the talent they need. (See the exhibit below.) Competition will come not only from the company down the street but also from the employer on the other side of the world. It will be a seller’s market, with talented individuals having many more job choices. Both countries and companies will need to brand themselves as locations of choice to attract this talent.

The report, titled Global Talent Risk—Seven Responses, proposes a holistic approach that can help companies and governments structure their efforts to solve the talent gap. More than 320 current practices of countries and organizations were evaluated and, along with additional quantitative and qualitative research, condensed into blueprints for action on how to attract, move, develop, diversify, and retain talent. The seven responses are as follows:

**Introduce strategic workforce planning.** Strategic workforce planning means modeling labor supply and demand for different job families to understand current and future imbalances and develop strategies for addressing them. At a national level, government officials can use assessments of current and future workforce demand to inform their strategies for improving and refining education initiatives, for example, or for easing immigration processes.

**Ease immigration.** The economic downturn and rising unemployment rates have further soured attitudes toward immigrants, with countries reducing quotas, setting tougher entry requirements, refusing to renew temporary work permits, and even paying workers to go home. Innovative immigration schemes and “immigration friendly” branding by states and companies are necessary to attract the right talent globally. For instance, the U.K. has replaced a confusing tangle of 80 work-permit and entry schemes with a point-based system. The more skills a prospective immigrant has and the more those skills are in demand, the more points that person gains, increasing his or her likelihood of entry to the U.K.

**Foster brain circulation.** Brain drain has long been a nagging concern of developing countries. However, there are strategies that can help turn the brain drain into a brain gain, as students and professionals return home to apply skills learned abroad. India, for example, has established the Ministry of Overseas Indian Affairs to reach out to the 25 million Indians living abroad.

**Develop a talent “trellis.”** Talent development—in all directions—is key to ensuring a sustainable pool of highly
skilled resources. Governments and companies must focus on going from career tracks to a trellis, building the skills required for the jobs of tomorrow and offering horizontal as well as vertical career and education paths. The U.S. states of California, Indiana, and Iowa support lifelong-learning accounts to encourage working adults to go back to school. People receive tax credits for contributing to their accounts, while their employers receive favorable tax treatment for matching the employees’ contributions. The funds can be used to pay for tuition, fees, books, and supplies, and are portable from job to job.

**Encourage temporary and virtual mobility.** Temporary mobility covers short-term work or study in another location, offering relatively easy opportunities to gain required skills, while virtual mobility is made possible by a networked world, enabling individuals to carry out their profession regardless of their location. A good example of virtual mobility: productivity rose by more than 35 percent in Best Buy departments that implemented a “results only” work environment in which employees were free to do their jobs when and where they wanted.

**Extend the pool.** Large pools of developed talent are currently underutilized. Countries and companies need to establish policies to tap into the skill sets of women, older professionals, the disadvantaged, and immigrants. Easily available child care, flexible work arrangements, mentoring and advisory roles, and improved options for licensing and recognizing credentials represent solutions to barriers faced by these groups. General Electric’s talent-spotting and mentoring program for women, particularly in Arab countries, is a good example.

**Increase employability.** Governments and companies can do more to boost the skill levels of both the current and future workforce. What’s needed is an adaptable but efficient education system that includes practical and theoretical skills, lifelong learning, and “up-skilling.” The German government helps companies establish cooperative vocational training programs through the Jobstarter program; it also funds an agency that supports “developing and emerging countries in building their capacities and managing the learning and change processes involved.”

These seven responses are indispensable for companies and countries in order to win their share in tomorrow’s global high-skills marketplace. However, according to the report, the largest gains will come from **coordinated efforts** among states, companies, international organizations, academia, and civil societies worldwide as they think beyond national borders and recognize the global benefits of mobile talent.
There are a number of other reports and articles on the topic of demographic risk management that may be of interest to senior executives. Recent examples include the publications listed here.

**Global Talent Risk—Seven Responses**
A report produced by the World Economic Forum in collaboration with The Boston Consulting Group, 2011

**Stimulating Economies Through Fostering Talent Mobility**
A report produced by the World Economic Forum in collaboration with The Boston Consulting Group, 2010

**Creating People Advantage 2010: How Companies Can Adapt Their HR Practices for Volatile Times**
A report by The Boston Consulting Group and the World Federation of People Management Associations, September 2010

**Creating People Advantage in Times of Crisis: How to Address HR Challenges in the Recession**
A report by The Boston Consulting Group and the European Association for People Management, March 2009

**Managing Demographic Risk**
Note to the Reader

About the Authors
Rainer Strack is a senior partner and managing director and the leader of The Boston Consulting Group’s Organization practice in Europe; Jens Baier is a partner and managing director and a core member of the firm’s Organization practice; both are in BCG’s Düsseldorf office. Philipp Zimmermann is a former principal in BCG’s Düsseldorf office.

Acknowledgments
The authors would like to offer their sincere thanks to Susanne Dyrchs, Sabrina Kristic, Christina Schenk, Sebastian Ullrich, Johannes Willberg, and other BCG colleagues for conducting analysis and helping to draft this report. They would also like to acknowledge John Kerr and John Campbell for helping to write the report, and Gary Callahan, Angela DiBattista, and Sharon Slodki for their contributions to its editing, design, and production.

For Further Contact
If you would like to discuss our observations and conclusions, please contact one of the authors listed below.

Rainer Strack
BCG Düsseldorf
+49 2 11 30 11 30
strack.rainer@bcg.com

Jens Baier
BCG Düsseldorf
+49 2 11 30 11 30
baier.jens@bcg.com