Thinking strategically about the what, where and how of migrating costs.

Making the move to low-cost countries

By Till Vestring, Ted Rouse, Uwe Reinert and Suvir Varma

BAIN & COMPANY

Till Vestring (till.vestring@bain.com), based in Singapore, directs Bain & Company's Asia-Pacific Industrial Practice. Ted Rouse (ted.rouse@bain.com), based in Chicago, directs Bain's Global Industrial practice. Uwe Reinert (uwe.reinert@bain.com), based in Dusseldorf, directs the firm's European Industrial practice. Bain partner Suvir Varma (suvir.varma@bain.com) is based in Singapore.

Copyright © 2005 Bain & Company Inc., 131 Dartmouth Street, Boston, Massachusetts 02116
United States of America. All rights reserved.

Editor: Katie Smith Milway
Managing editor: Susan Donovan
Layout: Global design

Lessons from leaders in cost migration

Migrating costs to low-cost countries (LCCs) has moved from being an "interesting idea" to an imperative for most industrial companies, but it's a "must do" that too often is managed with ambivalence. On the one hand, companies see it as a critical piece of their cost strategy; on the other, too many firms seem to attempt it only half-heartedly. They aren't sure which costs to shift elsewhere, where to shift them or how to go about the organizational changes that such "cost migration" implies.

The concept seems straightforward: Companies need to decide which suppliers and work sites to migrate from high-cost countries, such as Germany or the United States, to low-cost countries like Hungary, Mexico or Malaysia. But identifying the right opportunities in your supply chain—which encompasses everything from materials supply to research to engineering to manufacturing labor—can be tricky, given the need to balance lowering cost with accelerating time to market and mitigating risk.

Indeed, a recent Bain & Company survey of 138 manufacturing executives, in sectors ranging from automotive and chemicals to consumer products and technology, found that more than 80% of respondents believed that moving costs to low-cost countries was a high priority. However, less than two-thirds had made it a significant company initiative, and only 15% saw the benefits of offshoring value-added activities like R&D. Such incomplete efforts can shortchange the benefits that firms seek by moving costs abroad.

To attack the problem from all sides, companies must get beyond "whether" to act and face the fact that cost migration is a competitive necessity. Forrester Research predicts that up to 3.4 million service jobs will move offshore by 2015. German executives say 10,000 jobs are moving out of their country weekly. Our research finds that such moves are netting manufacturers in Europe and North America cost savings of 20% to 60%. When your competitors are realizing that kind of gain, whether to act is less a choice and more a matter of economic survival. The key to success lies in answering three other critical questions: *what*, *where* and *how* to migrate.

In our study, we found that on such decisions there was a clear divide between respondents who rated their companies as cost leaders and those who acknowledged their companies to be cost laggards. Sixty-eight percent of leaders say they already fulfill 20% or more of their global manufacturing needs in low-cost countries, versus only 13% of laggards, for instance. The differences between leaders and laggards are even greater when it comes to decisions about how to shift costs. But by taking a close look at the practices of the leaders, such as Emerson Electric, Honeywell International and GE, other companies can plot their course and close that gap.

Getting beyond "whether"

Despite the evidence pointing to the inevitability of shifting costs to low-cost countries, a surprising number of companies still chew on the question of *whether* to do it. In our study, 22% of laggards still struggled with this elementary decision. This is no simple issue for executives who anticipate that offshoring will require them to face painful decisions and organizational resistance. Moreover, some executives remain stymied by the mistaken notion that products from low-cost countries are of low quality. By comparison, not only have leaders already made their decision, but a third have already moved more than 40% of their sourcing to LCCs.

Consider the case of Emerson Electric, a $15.6 billion conglomerate and cost leader, which competes in a wide variety of industrial markets around the world. Back in the late 1970s,

Companies that understand that "low wage" no longer translates as "low skill" take a granular approach to cost migration. They examine specific functions and components on a case-by-case basis, identifying those ripe for migration and sidestepping those that are not.

Emerson found cost pressure heating up across many of its product lines. In response, in the mid-1980s the company embarked on an explicit strategy to methodically and progressively shift its sourcing, manufacturing and engineering from their traditional bases in Western Europe and North America to what Emerson calls "best-cost countries."

By 2002, low-cost countries had grown to account for 44% of Emerson's total manufacturing labor cost, a fourfold rise from a decade earlier. The company also made shifts of similar magnitude in materials and engineering and development (E&D). The payoff of Emerson's long-term strategy of transferring costs to LCCs has shown up in its earnings statements: The company's operating margins have steadily improved in the past decade, with an average annual shareholder return since 1994 of 19.8%, and dividend increases every year. Still, for Emerson the effort to migrate costs remains very much a work in progress. The company plans to continue to aggressively move production offshore. Its ambitious targets include doubling, yet again, its materials and E&D costs in LCCs by the year 2007.

Emerson isn't the only company persistently widening the gap with industry rivals that are slower to move costs. Honeywell and Siemens already have a solid global presence in manufacturing and engineering and plan to continue transferring costs to LCCs in the coming years. At General Electric, sourcing from China grew at a compounded annual growth rate of 66% from 2001 to 2003 and is now on track to hit $4 billion by 2005. Just one of the low-cost countries in which GE operates, China offers a broad range of products to all GE's businesses, from raw materials to highly technical finished goods. Auto maker General Motors is another firm that will increase sourcing in China, to $10 billion for auto parts.

The need to move to low-cost countries varies dramatically across industries and even across specific product categories within an industry. In our experience, the best indicators of that need are labor and transportation costs. Where labor accounts for a high percentage of total costs, and transportation costs are relatively low, most firms will need to migrate to low-cost countries to remain competitive. Prime examples include the textile industry and services such as call centers. The inverse also is true: Production facilities in high-cost countries make sense if labor is a minor cost component or transportation costs are high, as in high-value electronics or bulky appliances. In both situations, deciding whether to shift costs is not an all-or-nothing proposition but requires making focused decisions for each product line while looking deep into issues such as relative labor costs, logistics costs, customer requirements and time to market.

Take a Western manufacturer we'll call White Goods Co. In 2000, approximately 85% of White Goods' manufacturing and sourcing activities were in high-cost countries. Facing increasing competition and pressure on its margins from Asian competitors like LG, Samsung, Haier and Kelon, which were capitalizing on cheap local labor, White Goods took a careful look at its logistics, mapping its supply chain resources and capabilities, and benchmarking itself against competitors with regard to logistics, costs and service levels. As a result of taking a fine-grained yet strategic view toward cost management, White Goods has been able to shift specific pieces of its manufacturing and sourcing activities to low-cost countries. Already, the company is quickly closing the cost gap with its Chinese and Korean rivals.

What to move: Thinking functions, not factories

Another telling difference between cost leaders and laggards surfaces in the way that they think about *what* to outsource. The contrast in choice stems from the very different view each takes with regard to the perceived costs and benefits of moving manufacturing and sourcing activities to LCCs.

With improved capabilities and highly educated labor now available in low-cost countries, companies can target complex activities, such as engineering, procurement, high-value-added manufacturing and R&D, for migration. Today, 77 global companies have R&D facilities located in India; Intel, for instance, is in the process of growing its R&D center from 1,000 to 3,000 employees.

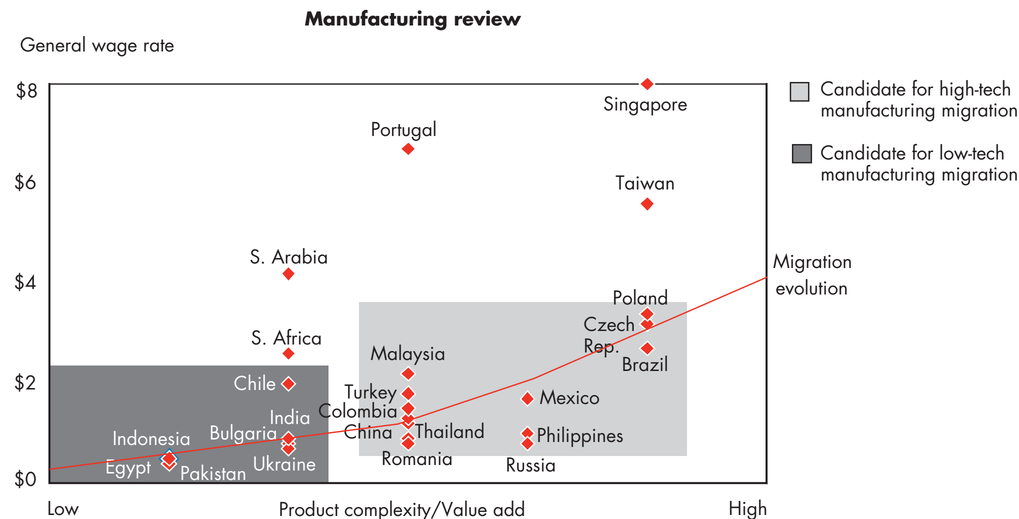
Some companies miss these opportunities because they fear that in lower-cost countries they'll face risks that are outside their control, like the Asian economic crisis of the late 1990s or recent acts of terrorism in Indonesia. But more often they fail to manage their cost base because they have not acknowledged or understood the risks that they can control.

It's hard to overlook the fact that engineering costs are almost four times higher in Germany than in India. Or the notion that several Asian countries—such as Singapore and Taiwan—have a higher average education level than the UK or France do. In light of that, managers may be tempted to simply shut down an operation in a high-cost country and move it wholesale to a low-cost one. But transplanting entire factories is not necessarily the solution, even where significant improvements in cost competitiveness are critical to survival.

The sheer costs of closing down a manufacturing facility in a high-cost country can be staggering—as much as 200,000 Euros per laborer in a country like Germany. Add to that the cost of new plant investment in low-cost countries and hidden "legacy" costs, such as disrupted relations with local suppliers or longer time to market, and shifting an entire production facility just may not be viable.

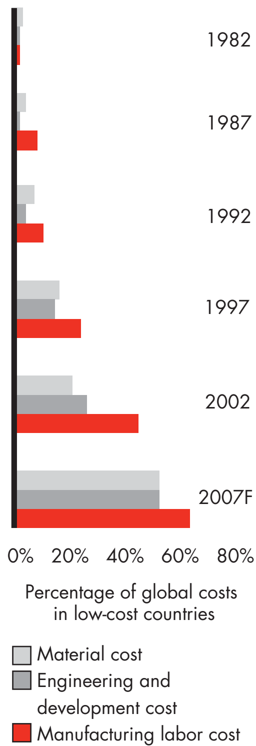
By thinking in terms of functions, not factories, companies can approximate the savings of moving facilities without bearing the shut-down and start-up costs. In our work with clients, we have found that companies can reduce unit costs significantly by aggressively shifting sourcing to low-cost countries, moving out low-value-added activities and, in parallel, increasing plant productivity. Companies that follow that approach are often able to avoid expensive, disruptive and painful plant closures. (For a framework for assessing migration opportunities, see Figure 1.)

Figure 1: Assessment of opportunities to migrate manufacturing costs



Note: "High-tech" refers to goods with high complexity, such as automobiles, airplanes or complex mechanical, electronics, or automation equipment. "Low-tech" refers to goods with low complexity, such as textiles, basic consumer goods or simple mechanical devices like switches or circuit breakers.
Source: Bain analysis.

Figure 2: Emerson has sustained its commitment to comprehensive cost migration



Source: Emerson investor presentations; analyst reports.

Second, a comprehensive look at the global market and the benefits it offers can be rewarding, whether you're seeking top-notch aerospace-engineering skills in Moscow or accounting acumen in Central America. (Yes, Boeing has a design center in Russia, and Procter & Gamble has its payroll done in Costa Rica.) Many low-cost countries actually offer surprisingly high quality manufacturing skills at low to reasonable cost. Other countries offer unexpectedly deep and reliable pools of educated talent, with India being a particular case in point. That country is home to 25 million English-speaking white-collar workers—whose number will grow by 1 million people a year for the next 40 years.

Companies that understand that "low wage" no longer translates as "low skill" take a granular approach to cost migration. In practice, this means that they examine specific functions, such as finance or marketing, and components on a case-by-case basis, identifying those ripe for migration and sidestepping those that are not.

In fact, cost leaders, like General Electric, which has built an R&D center in India with a staff of 500, about one-third of whom are PhDs, are about twice as likely as laggards to see the benefits of performing knowledge-intensive activities like R&D in low-cost countries, according to our study.

A third benefit: firms that shift costs are better equipped to build new markets in the host country. Emerson now has a production presence in Asia and Mexico, and much of its engineering talent in India, the Philippines and China. The last is a country in which Emerson does $900 million worth of manufacturing and sourcing. But here's the flip side: China not only is a key link in Emerson's global supply chain but also accounts for more than $1 billion in annual sales of products ranging from industrial motors to network power systems. Its increased presence in that country has deepened Emerson's knowledge of the market and helped it build connections that will enable it to thrive there. Siemens, too, notes that it is increasing production in low-cost countries to meet growing demand in emerging markets. And one of the key reasons GE sources extensively in China is that China represents a vast market for its offerings: a projected $5 billion this year. Like Emerson, GE is now selling more in China than it is sourcing—$1 billion more, in fact.

Fully grasping the scope of the LCC opportunity helped Emerson Electric not only to strive for lower costs globally but to improve sales in emerging markets. Altogether, because of its long-term, organization-wide commitment to cost migration, the company has been able to grow its sourcing, E&D and manufacturing activities in LCCs more than fivefold over a 20-year period. (See Figure 2.)

Where to move: Going east for the right reasons

After asking themselves *where* to migrate costs, many companies are joining the race to China and India—and for good reason. Each offers an attractive combination of astonishingly low costs, surprisingly well developed capabilities, investor-friendly governments and a large domestic market, all reinforced by the host nation's robust public relations. China, in particular, beckons as a huge market, with a labor pool to match. Factory labor costs of $20 to $30 an hour in the West dwarf the current Chinese figure of about $1 an hour, and that wide differential will likely remain for decades to come.

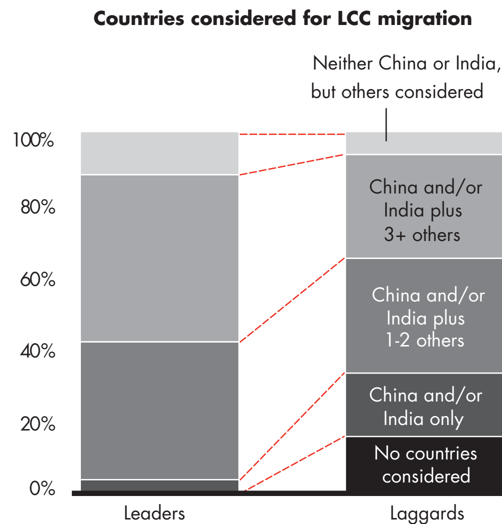
Indeed, China and India are the top two destinations cited by both leaders and laggards in our survey. But laggards are much more limited in their geographic footprint and are far less likely to consider other low-cost locations besides China and India. (See Figure 3.)

By contrast, cost leaders take a portfolio approach, calibrating capabilities and risk, function by function, when looking at where they might move costs. They anchor decisions in two insights: understanding that the list of top low-cost destinations is not carved in stone but changes over time, and understanding that a portfolio of low-cost countries is critical to ensure security of supply and stable costs.

As a consequence of this mind-set, cheap labor is not the top reason that cost leaders cite for going East. Aware that publicly available rankings of countries' cost-competitiveness are based on *historic* data, cost leaders look for data that can inform decisions with *long-term* implications. In many industries, a new plant will have an investment horizon of 20 to 30 years—and yet much can change in 5 years, let alone 20.

Likewise, companies may want to avoid putting too many eggs in the China basket, where companies face political risks and a lack of enforcement of intellectual property rights. To manage those concerns, our research found, cost leaders think of their global supply chain in a way that balances lowest cost against political and economic risk and proximity to key markets. While on a simple comparison basis China may be the most attractive low-cost location for many products, a portfolio approach means accepting higher unit costs in other Asian countries, Eastern Europe or Latin America to protect

Figure 3: Where leaders migrate vs. laggards

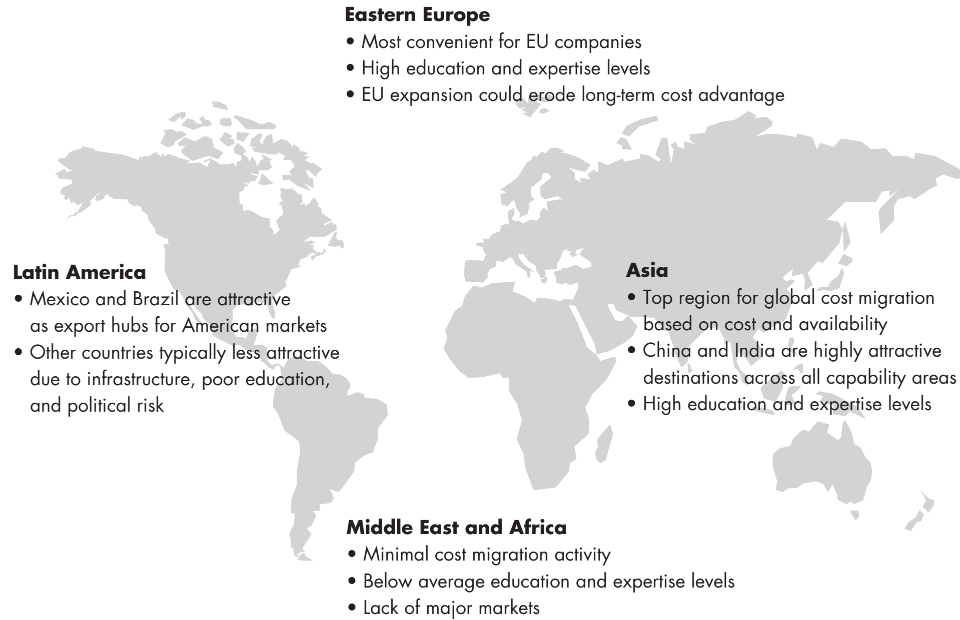


Source: Bain Cost Migration Survey, 2004. (n = 183)

against currency risks, political risks or the impact of natural catastrophes. Hungary's labor cost, for example, is more than four times that of China, but Hungary offers a highly educated workforce and relatively low political risk: a good bet for Western European companies looking to move skilled manufacturing. (See Figure 4 on next page.)

That said, a portfolio approach requires focus and discipline to manage cost-migration initiatives strategically—and not based on a country's popularity or convenience. Emerson has homed in on and built up four major production centers around the world, a portfolio that spans Eastern Europe, Asia and Latin America. By contrast, many industrial companies face a legacy of fragmentation: subscale plants in dozens of countries, each focused primarily on local assembly. Without revising their approach, those companies won't be able to achieve the economies of scale or the scope necessary to move into a best-in-class cost position.

Figure 4: Regional trends in cost migration



Source: Bain analysis.

How to move: Organizing for success

Companies often face a final hurdle on the *how* as they try to put their cost migration strategy into practice: their own organization. Here, again, we have found a dichotomy of practices. Self-confessed cost laggards say they are far more likely to leave cost migration up to individual business units. Unfortunately, that limits their potential to achieve results in two ways. First, the business-unit-by-business-unit approach encourages incremental decision making, rather than a strategic approach to cost management. Second, companies on this tack can't reap savings across business units by pooling sourcing, jointly developing new suppliers or expanding economies of scale in low-cost countries.

Companies planning to shift a substantial part of their cost base to low-cost countries need to embark on a *multi-year, comprehensive and broad-based program*—one driven from the top down. According to our study, 82% of cost leaders use a company-wide or centralized initiative. The advantage of a top-down, centrally driven change program? It allows companies to use scale to their advantage as they build out their presence in low-cost countries, and, perhaps most important, it is often the only way to overcome deep ingrained resistance. Siemens, for example, has announced that it will increase production in low-cost countries from 15% to 33% for its Osram division.

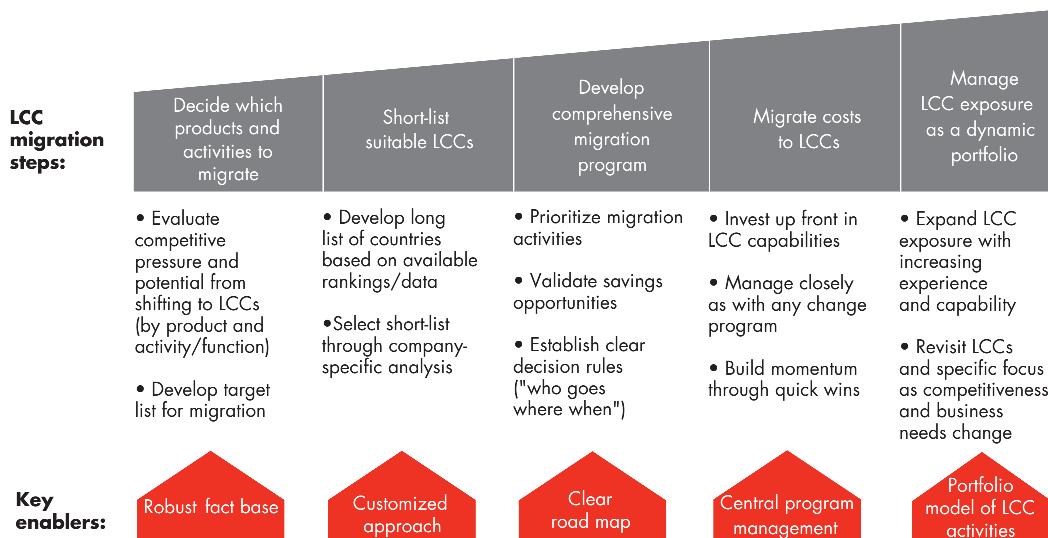
Consider how the top-down approach has already given a leading global industrial and engineering group a series of insights that will guide the early stages of its journey toward change. To start, the group's executives took a hard look at their future cost position and saw that competitors were on track to move more than 60% of their cost base to LCCs within just a few years. As a result, the group's executives realized, "we need to structurally lower our cost base—or we will perish."

Next, after taking a top-down view of the sourcing and manufacturing initiatives it already had under way in low-cost countries, the firm realized that those programs were incremental and mostly focused on serving local markets. By taking an organization-wide view of its cost-management initiatives, the firm has been able to develop a strategic road map for "what moves where and when" that improves both its cost structure and its capabilities.

Of course, effective cost migration requires other important elements besides top-down leadership. (See Figure 5.) In our experience, those elements include:

- establishing detailed and robust information on current costs and potential savings;
- prioritizing the most urgent and highest-opportunity areas for cost migration;
- deciding on a short list of low-cost countries, selected based on longer-term cost competitiveness and existing capabilities and structures;
- investing up front in sourcing, manufacturing and engineering infrastructure and capabilities in the selected low-cost countries;
- managing sourcing and manufacturing as a company-wide, dynamic portfolio, balancing lowest costs against risks and exposure;
- developing a detailed road map and driving high-quality program management;
- establishing a "quick win" program, typically in sourcing, to at least partly fund the overall migration effort.

Figure 5: Top-down approach to LCC prioritization



Getting started

Initiating yet another corporate-wide program can seem daunting and exhausting to most organizations and executives. And despite the urgency, cost migration has to be treated as a marathon, not a sprint. As the best cost-migration leaders have proved, this is a decade-long process that ultimately becomes a regular way of doing business.

So where to begin? Our experience has shown us that there are a few useful tips for those initiating or trying to reenergize a cost-migration program:

- Start with sourcing, not assembly. Much of the embedded labor for industrial products lies in the labor used to make purchased components and materials. Savings can be achieved by sourcing from low-cost countries without disrupting a company's workforce. More important, a company needs to have a reliable local supply base in place before it moves assembly operations to a location.
- Take a hard look at your "make or buy" choices for parts and components. Again, component costs often involve high labor costs but are easier to move.
- Don't export complexity to a foreign shore. Analyze your product line's complexity. Do you really need all the SKU variety you have? Simplify the product line before starting up a new factory overseas.
- Design production processes in low-cost countries to exploit the labor-cost differential. That may even mean going back to older, less automated production processes.
- Invest heavily to build capability and scale in a small group of low-cost countries, especially in supplier selection and supplier development, operations and training. Use seasoned executives to set up operations, but drive to build local management talent rapidly.

Throughout, executives need to guard against underestimating the challenges of driving a large-scale initiative. There are no ready-made answers to *what*, *where* and *how* to migrate costs—and it always takes a major company-wide effort and strong leadership to overcome the organizational resistance to shifting a significant part of a company's cost base.

For industrial companies today, shifting their cost base to low-cost countries is not an option but a competitive necessity. The ambitions of many companies we surveyed reflect that fact: 69% intend to lower costs by at least 10% by shifting them to LCCs, and 28% have targeted 20% of costs or more for migration. In our experience, savings of that magnitude can be realized, at least for companies that avoid conventional pitfalls. Managers who are smart about what they migrate, who build up a portfolio of destinations, and who drive cost migration across their entire organization can do better than just compete. They will be in a position to make their companies tomorrow's cost leaders.

Bain's business is helping make companies more valuable.

Founded in 1973 on the principle that consultants must measure their success in terms of their clients' financial results, Bain works with top management teams to beat their competitors and generate substantial, lasting financial impact. Our clients have historically outperformed the stock market by 3:1.

Who we work with

Our clients are typically bold, ambitious business leaders. They have the talent, the will and the open-mindedness required to succeed. They are not satisfied with the status quo.

What we do

We help companies find where to make their money, make more of it faster and sustain its growth longer. We help management make the big decisions: on strategy, operations, technology, mergers and acquisitions, and organization. Where appropriate, we work with them to make it happen.

How we do it

We realize that helping an organization change requires more than just a recommendation. So we try to put ourselves in our clients' shoes and focus on practical actions.

BAIN & COMPANY

Bain & Company, Inc.
131 Dartmouth Street
Boston, Massachusetts 02116
USA

Tel: 1 617 572 2000
Fax: 1 617 572 2427

For more information, please visit **www.bain.com**

Amsterdam • Atlanta • Beijing • Boston • Brussels • Chicago • Dallas • Düsseldorf • Hong Kong • Johannesburg • London
Los Angeles • Madrid • Melbourne • Mexico City • Milan • Munich • New York • Palo Alto • Paris • Rome • San Francisco
São Paulo • Seoul • Shanghai • Singapore • Stockholm • Sydney • Tokyo • Toronto • Zurich