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▶ WHITE PAPER

The Argument for ReShoring American IT

The Risks of Outsourcing Offshore, and Why
“IT ReShoring” is Growing



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Meet Joe. Joe is an IT manager at a healthcare company. Joe lays off 10 engineers and developers – more than half his IT staff. He outsources their jobs to a large IT firm in India. The numbers say he’ll save up to 80% on labor costs. Which means he can tackle some new projects sooner – and cheaper!

However, 6 months later he’s having some problems...

- » Time zone differences are challenging and workers keep changing.
- » Language issues are constant.
- » Deadlines go by unmet.
- » Overall productivity goes down – even in the local office.
- » Joe’s savings are quickly ruined:
 - His local Indian manager raising wages 3 times “to keep workers interested”¹
 - Hidden costs pop up (legal, training, travel, government and vendor relations)
 - Productivity per worker never approaches U.S. standards
- » A large section of India’s power grid goes down, forcing Joe’s offshore staff to stop working² (and Joe panics over the possibility of lost data).
- » News of IP/identity theft by employees of offshore firms keeps coming in.

Then Joe is handed a big application development project, which will involve processing customers’ private data and billing information. Is it safe to engage his offshore IT firm?

We’ve just illustrated many of the dangers businesses face when outsourcing IT services offshore:

- Communication issues
- Lower productivity
- Managerial problems
- Minimal or no real cost savings
- Higher risk of data loss and IP/identity theft

And these are only the issues each **business** faces.

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This white paper will discuss the state of offshoring IT services and manufacturing, its effects on the U.S. economy, and what can be done. Finally, it will detail the ReShoring trend, explaining why the trend has come about, and what it can do to improve American business.

Offshoring = Instant Cost Savings? Not Anymore

Offshoring as a long-term cost-saver is failing. 17-53% of companies who outsource don't even realize an ROI from offshoring, according to CIO Magazine.³

Companies who outsource are seeing an increase in their costs due to several factors, including:

- 1) Worker wages in offshore destinations (like India and China) continue to increase.
- 2) Natural disasters and outdated infrastructure.
- 3) Rising energy costs.
- 4) Political risk damaging business reputation & supply.
- 5) IP and customer identity theft.
- 6) Domestic job loss reducing the number of available customers.

In terms of domestic job loss: Last month, **NBCNews.com** posted an article showcasing the top 10 states which have lost a total of 2.7 million jobs (mainly in manufacturing) to China between 2001 and 2011. California, Massachusetts, Texas and 7 other states have lost millions of jobs, raising unemployment and hurting their regional economies⁴.

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Political risks factor heavily into public perception of those who outsource offshore. Apple has been called to account for its manufacturing contracts with Foxconn, a Chinese firm which manufactures its iPhones.

Foxconn has been slammed for its business practices and working conditions. Twelve-hour shifts for less than \$300 a month. Overworked employees committing suicide to escape building one more iPhone. A 2000-worker riot in September 2012 that shut down the factory⁵.

Said one Apple executive to a **New York Times** reporter inquiring about how the U.S. lost out on iPhone work, "We don't have an obligation to solve America's problems. Our only obligation is making the best product possible."⁶ This statement implied that Apple did not owe anything to the country it grew in, the employees who helped create their products, or the populace with the highest consumption rate of their products.

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Is it any surprise that attitudes toward companies who offshore grow more negative as time passes?

TIME Magazine highlights the issues facing businesses offshore in its August 2012 article, **The Economy's New Rules: Go "Glocal"**. One quote from the author sums up the whole problem:

*"When energy prices and political risk go up, far-flung global supply chains make less economic sense."*⁷

Offshoring's Effects on the U.S. Economy

Connecticut U.S. Senator Joe Lieberman commissioned a white paper in May 2004 providing a detailed review of the offshoring phenomenon and its impact on the United States: **"Offshore Outsourcing and America's Competitive Edge: Losing Out in the High Technology R&D and Services Sectors."**⁸

"While American companies may be improving their individual competitiveness in the short term, they may be collectively undermining America's and their own competitiveness in the long haul."

According to the white paper, "The offshoring trend in services began in the late 1990s when industry had to go abroad to meet the IT labor shortage in the United States caused by the excessive Year 2000 workload and the boom of the dot.com economy. Encouraged by large cost savings and enabled by advances in IT, corporations continued to offshore labor intensive IT service such as legacy software maintenance and low level coding. **Now sophisticated IT tasks like web applications, development, XML, software design, architecture, and management are going offshore.**"

Where are those tasks going? India of course, and China. Other countries popular for outsourcing include Malaysia, the Philippines, Brazil, Peru, and Vietnam. Gartner identified 30 countries where we're outsourcing work⁹.

The white paper concludes that, "While American companies may be improving their individual competitiveness in the short term, they may be collectively undermining America's and their own competitiveness in the long haul." The white paper proposed a strategy for the U.S. to address offshoring and also included a list of offshoring-related legislation at both the federal and state levels proposing bans or restrictions on use of offshoring for government contracts.

The U.S. economy, its IT talent pool, and even its national security are seriously hampered by the offshoring trend.

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Effects on U.S. Intellectual Property and Customer Privacy

Lucrative outsourcing contracts from the U.S. are not enough for some offshore contractors. Multiple outfits in these countries – China in particular – actively engage in cyber-theft of American corporate IP, trade secrets, customer information and even national security data.¹⁰

How? IT projects by their very nature require sharing confidential R&D and customer information.

What happens to this information once stolen? It's resold in an underground cyber-economy, to competitors and other foreign governments. From a VentureBeat.com report:

"A company's legal documents can fetch far more money than a list of credit card numbers, which go for something like \$6 a piece on the internet. The problem outlined by the report is that many companies have too little security protecting their secrets. Cyber criminals are making money selling trade secrets,

marketing plans, research and development findings, and even source code."¹¹

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The report also details recent massive-scale attacks, such as Operation Aurora, a 2009 cyber-attack against Google and dozens of other major technology companies. Analysis indicates the attack originated in China.

No one knows for sure how much IP has been stolen by overseas organizations. Business software piracy alone is estimated in the billions, according to **Intellectual Property Rights Violations: A Report on Threats to**

United States Interests at Home and Abroad, a 110-page IPTheft report produced in 2011 by the National Property Rights Information Center.¹² The report concludes with:

"This report has shown the consequences of IP theft are not limited to rights holders whose IP is stolen, but include threats to the public's health and safety, national security and the safety of United States war fighters, the United States government from lost tax and customs revenue and misplaced jobs, and critical United States infrastructure."

"The threat continues to evolve."¹²

Companies who offshore their IT are essentially handing over their private data for exploitation.

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Effects on U.S. Talent Pool

To work for American businesses, the offshore strategy must include offshore workers and foreign workers brought to the U.S. on worker visas. H1-B and L-1 visas cause a big talent drain when workers leave again (with extra training and improved skillsets).

In January 2011, Manufacturing & Technology News reported that “India now has 2 million workers employed in the IT offshoring and business process offshoring industries. An estimated 65 percent of those workers directly serve the U.S. market, according to data from NASSCOM, the Indian IT trade association.¹³”

In October 2010, Ron Hira of the Economic Policy Institute wrote “The H1-B and L-1 Visa Programs: Out of Control.” In it he states, “Both of these visa programs need immediate and substantial overhaul. The goals

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of the H-1B and L visa programs have been to bring in foreign workers who *complement* the U.S. workforce. Instead, **loopholes in both programs have made it too easy to bring in cheaper foreign workers, with ordinary skills, who directly *substitute* for, rather than complement, workers already in the country.** They are clearly displacing and denying opportunities to U.S. workers.¹⁴”

Displaced U.S. workers leave gaps in the highly-skilled job ranks. Without skilled technology workers, our infrastructure breaks down.

Effects on U.S. National Security

Then consider the undermining effect that offshoring has on American IT innovation and advancement with respect to our national security. A Council on Foreign Relations report “U.S. Education Reform and National Security” (March 2012)¹⁵ found that offshoring **undermines the present and future pool of talented American IT experts**, providing cutting-edge R&D and technical experience to workers in other countries instead.

Former Secretary of State Condoleezza Rice has stated that **education** could be the “**greatest national security challenge**.”¹⁶”

The Armed Forces agrees. Commanders from each major branch were consulted for a July 2012 article on cyber defense. They all agreed – highly-skilled people are the key to protecting American networks and data.

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“Cyber war is complicated, the commanders said, because defending systems demands world-class engineers and technicians and the military must compete with other public agencies and the private sector in attracting these world-class specialists.”¹⁷

The U.S. is already more vulnerable to cyber-attacks as a direct result of offshoring. Imagine a backdoor built into critical system firmware. Leaving nationwide networks open to outside control.

It's already here. In May 2012, a Cambridge researcher discovered that tech components manufactured in China, like the PA3 chip¹⁸, are made with a built-in backdoor that could allow Chinese cyber-spies

remote access to the chips. The PA3 chip is used in U.S. military “weapons, guidance, flight control, network and communications” hardware, in addition to civilian “nuclear power plants, power distribution, aerospace, aviation . . .”

The risk is not limited to one chip, either. The security of entire sections of our telecommunications network was recently called into question . . . by the U.S. House Intelligence Committee itself.¹⁹ Their concern? Huawei Technologies Ltd and ZTE Corp, two Chinese manufacturers of telecom equipment and cellphones. After a yearlong probe, the Committee recommended against doing business with both companies.

Without highly-trained science and technology experts in the U.S., how can we handle the threats of cyber-warfare, cyber-security, and protect our country's infrastructure?

Why? Neither company fully detailed their relationship with the Chinese government. Documentation from former employees led the committee to believe these outfits provide “special network services to an entity alleged to be an elite cyber-warfare unit within the People's Liberation Army.”

“The committee contended that Chinese intelligence services . . . often recruit those with direct access to corporate networks to steal trade secrets and other sensitive proprietary data.”¹⁹

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Effects on U.S. Middle Class

When middle-income jobs in the U.S. are lost like this, we see higher unemployment, lower tax revenues, unemployment benefits, less spending, and economic stagnation.

Offshore manufacturing has become politically unpopular, as many U.S. consumers have woken up to the economic impact. Americans' growing concerns are evidenced by a number of television programs that shed light on such issues, *including ABC World News “Made in America” with Diane Sawyer*, or

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“Bringing America Back” with Chris Cuomo. Awareness of the effects of offshoring “service” jobs is also growing.

We’ve even seen movements form between corporate America, manufacturers, and labor to bring work home and create local jobs. These include:

- 1) [CreateJobsforUSA.org](#), with sponsors like Starbucks and Citibank, working to provide financing for small businesses. Which in turn create jobs for Americans.
- 2) [ShouldBeMadeinAmerica.com](#), created by the Alliance for American Manufacturing, a labor-business partnership committed to rebuilding our nation and strengthening our manufacturing base, by promoting local labor and materials production.
- 3) [Supplier-Connection.net](#), started by AT&T, Bank of America, Citibank, IBM, Pfizer, and UPS, is a free web-based portal that allows small businesses to more easily apply to become suppliers to large companies.

The Go Glocal article emphasizes the financial benefits of “localnomics,” or “more focus on regional economic ecosystems and how to foster job creation at home.”

When you factor IT services into this, you see a rising trend among American businesses. A trend labeled **ReShoring**.

What is ReShoring?

Offshoring IT meant contracting IT services like software development, tech support and supply chain management to overseas firms.

“ReShoring” is the reverse – hiring local workers to perform the same IT services in-house (or contracting a local IT firm to do the work). It’s also called “insourcing” or “backsourcing.”

In March 2012, staffing firm Synergrouop issued a press release saying they’ve seen growth in IT reshoring²⁰. From the release:

“Mark Jennings [the firm’s VP] points out that beyond cost considerations, the public relations price businesses pay in shipping American jobs overseas – especially in an election year – are not inconsequential. He notes that debate about economic issues tends to increase local community focus on corporate hiring policies. Patriotism may not be a factor in the decision making of some firms – but with others it cannot be ignored.”

The reasons Synergrouop’s clients cited for reshoring?

Same as the offshoring dangers listed in Joe’s story – poor communication, low productivity and high employee turnover. According to Mr. Jennings: “What we’re hearing from clients seeking IT personnel is that a cost-point has been crossed. Hiring American is now both good policy and good economics.”

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The Go Glocal article gives more detail on how American companies are finding economic reasons for reshoring:

“For much of the last 15 years, it seemed like the attitude was that anytime you could find a lower cost anywhere in the global supply chain, you did it, with no thought of the difficulties or risks that things could go wrong,” says Gene Sperling, head of the National Economic Council. “More US companies are rethinking that calculation, and that holds open the promise of more location and insourcing here.”⁷

How ReShoring Brings Back Jobs (Without Hurting Profits)

“Ensure access to a highly skilled labor force, connect educators to job creators, and help smaller businesses become suppliers to big firms.”⁷

That’s what the “Go Glocal” article suggests for how to bring back jobs to the US.

ReShoring foments job growth locally, creating a ripple effect that benefits both regional economies and business’ bottom lines.

One effort is already spearheading the last point. Supplier Connection is an online network of major U.S. companies that went live in March 2012. It connects the major firms to smaller, local companies from whom they can source business needs.

These connections create a huge job growth effect: Average employment growth for smaller firms is 164% within 2 years of becoming a big-company supplier, according to the Center for Urban Future.⁷

We’ve already demonstrated above that, taking all factors into account, offshoring is no longer a guaranteed cost-saver. And it shrinks the talent pool already available in the US. ReShoring foments job growth locally, creating a ripple effect that benefits both regional economies and business’ bottom lines.

You might ask: “But won’t high U.S. worker wages cut into corporate profits?”

To some companies, sacrificing profit ‘just to help the U.S.’ is a non-starter. Consider an April 2012 article from The Guardian titled, **Apple: Why doesn’t it employ more US workers?**²¹

The article holds out one of the most visible examples of IT offshoring: Apple’s iPhone. And breaks down its cost vs. profit margin.

“Assembled in China, the total cost of putting together just one phone was \$178.45. Compare that with a sale price (including downloads) of \$630 and Apple makes \$452 on each phone (a profit margin of 72%).”

Huge profit margin. **Would it evaporate if the iPhone was made in America?**

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Well . . . “Assembled in the US, using an average US wage of \$21/hour, total production cost would increase to \$337.01. Big jump – but it still leaves Apple with a profit margin of 46.5% on each iPhone.”²¹

It seems not.

This is a manufacturing cost vs. profit claim though. What about IT services? Is ReShoring the better choice for IT, instead of outsourcing support/programming, etc. overseas?

Why ReShoring is Better for Your Company (and the USA)

The following table lists the risks of offshoring IT. Each risk is compared to a solution via ReShoring.

OFFSHORING	RESHORING
<p>Risks Network Security 69% of surveyed IT managers thought outsourcing decreased the security of their data²²</p>	<p>Lowers Network Security Risk^{20,24} While many overseas datacenters employ IT security, data kept locally has a lower risk of theft during transfers</p>
<p>Reduces Skilled Jobs Available Locally²³ In January 2011, it was estimated that 1.3 million U.S. IT services jobs were offshored to India alone²⁴</p>	<p>Creates More Local Middle-Income Jobs Improves U.S. economy and provides career opportunities for American students with technical aptitude</p>
<p>Higher Risk of IP Theft Are there laws protecting your IP in the country where it is being developed? Do you have the means to defend that IP, should your developers sell it to someone else?</p>	<p>Lower Risk of IP Theft Stringent U.S. copyright and trademark laws protecting intellectual property, and relative ease of enforcement</p>
<p>High Privacy Risk Risks customer & employee privacy by sending private data overseas; some projects, by their very nature, manage private data—61% of companies who outsource reported a data breach²⁴</p>	<p>Lower Privacy Risk Protects customer privacy by keeping private data under local security – if data is not voluntarily sent overseas, hackers overseas must break into U.S. servers to reach it</p>
<p>Low Worker Productivity Different quality standards, no control over worker conditions, high turnover in competitive offshoring markets, workers insulated from the customer by time zone differences, no direct reporting to the customer</p>	<p>High Worker Productivity A study by the University of Michigan Ross School of Business completed just over a year ago, found that inshore IT services were 2.9 times more productive than offshore IT services overall²⁶</p>
<p>Disjointed Teams No chance to nurture employee skillsets and cultivate loyalty among teams²⁵</p>	<p>Unified Teams Encourages innovation & teamwork</p>
<p>No Managerial Control Outsourcer has no managerial control over service provider and little direct contact with workers</p>	<p>Direct Managerial Control Most organizational behavior experts agree that face-to-face communication and onsite management is still the most effective work model</p>

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Do We Have Enough Skilled Workers for ReShoring Jobs?

If more businesses decide to ReShore their IT jobs, will there be enough skilled U.S. workers to meet the demand?

With outsourcing and foreign visas making a gap in the workforce (see “Effects on U.S. Talent Pool” above), the concern is valid. However, more recent studies indicate that the necessary talent is available.

Computer Science student enrollment in the U.S. went up 10% in 2011, and 10% more in 2012²⁷. **This trend alone could close the gap . . .** but education isn’t the only element contributing to ReShoring.

High-tech firms like Microsoft, IBM and Cisco are starting up 6-year high school/college combination programs, intended to train qualified mid-level employees for immediate hire.⁷

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Even the U.S. government is taking action. In June 2012, the Homeland Security Advisory Council formed a Task Force on CyberSkills, to develop a plan to build & train a workforce capable of protecting against IP theft and cybersecurity attacks.²⁸ Its objectives and strategy are detailed in the **Fall 2012 Cyber-Skills Task Force Report**.

Argument Made: ReShoring IT Work Benefits Business and the U.S.

Going offshore is no longer the “holy grail” for saving money on IT. It’s proven to be risky, rife with day-to-day work issues, bad for the U.S. economy, and a danger to national security.

The IT talent American businesses need is right here. And it’s poised to push the U.S. into a safer, technology-driven future.

If any part of your IT is offshore, or you’re thinking of sending it there, consider ReShoring first.

Sources

- 1 **Made in America, Again: Why Manufacturing Will Return to the U.S.** – Harold Sirkin, Boston Consulting Group, 8-25-2011
- 2 **Second Indian outage in two days cuts power to more than 600 million people** – NBCNews.com, 7-31-2012
- 3 **Offshore Outsourcing: Quantifying ROI** – CIO Magazine, 11-4-2008
- 4 **"States that have lost the most jobs to China"** – Douglas McIntyre and Samuel Weigley, NBCNews.com, 9-16-2012
- 5 **"Foxconn confirms worker riot at Taiyuan factory"** – David Hamilton, CNET, 9-23-2012
- 6 **"How the U.S. Lost Out on iPhone Work"** – Charles Duhigg and Keith Bradsher, New York Times, 1-21-2012
- 7 **The Economy's New Rules: Go Glocal** – Rana Foroohar, TIME Magazine, 8-20-2012
- 8 **Offshore Outsourcing and America's Competitive Edge: Losing Out in the High Technology R&D and Services Sectors.** Office of Senator Joe Lieberman, 5-11-2004
- 9 **Gartner Identifies Top 30 Countries for Offshore Services in 2010-2011**, 12-20-2010
- 10 **"Panetta: Chinese Cyber Attacks Unabated"** - Lolita C. Baldor, Associated Press, 9-21-2012
- 11 **"Intellectual property theft fuels underground cyber economy"** – Dean Takahashi, VentureBeat.com, 3-27-2011
- 12 **Intellectual Property Rights Violations: A Report on Threats to United States Interests at Home and Abroad** – National Intellectual Property Rights Coordination Center, Nov 2011
- 13 **Indian Outsourcing Firms Use H-1B to Displace U.S. High-Tech Workforce** – Manufacturing & Technology News, 1-19-2011
- 14 **EPI Briefing Paper, "The H1-B and L-1 Visa Programs: Out of Control"** – Ron Hira, 10-14-2010
- 15 **U.S. Education Reform and National Security** – Council on Foreign Relations, March 2012
- 16 **Condoleezza Rice: Education Could Be 'Greatest National Security Challenge'** – PBS NewsHour, 3-20-2012
- 17 **"Highly Skilled People Are Key to Cyber Defense, Leaders Say"** – Jim Garamone, American Forces Press Service, 7-26-2012

- 18 **Proof That Military Chips From China Are Infected?** – DefenseTech Blog, 5-30-2012
- 19 **House panel: China tech giants Huawei, ZTE a security threat to U.S.** – CBSNews.com, 10-8-2012
- 20 **"Jobs Go from Offshore to Onshore in Sluggish Economy"** – Synergrou, 3-7-2012
- 21 **Apple: Why doesn't it employ more US workers?** – Aditya Chakraborty, TheGuardian.co.uk, 4-13-2012
- 22 **"Outsourcing Risk"** – Security Management Magazine
- 23 **"Offshoring shrinks number of IT jobs, study says"** – ComputerWorld, 3-21-2012
- 24 **"Dangers of Background Check Firms Offshoring Personal Data of Americans Outside of US Revealed in Whitepaper"** – ESR News, 3-21-2012
- 25 **Disadvantages of Outsourcing** – RoseIndia.net
- 26 **Obama wants less offshoring, as vendors see U.S. shift** – ComputerWorld, 1-19-2012
- 27 **"Computer science enrollments rise again by 10%"** – NetworkWorld, 4-10-2012
- 28 **CyberSkills Task Force Report** – Homeland Security Advisory Council, Fall 2012

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