



An IT Recruiter's Guide to the Stimulus Plan

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An IT Recruiter's Guide to the Stimulus Plan

By Mark M. Feffer and Don Willmott

Introduction

Much anticipated, much ballyhooed and much-analyzed, the American Recovery and Reinvestment Act takes grand ideas, feeds them with hundreds of billions of dollars and, it's hoped, turns them into more than 3.5 million jobs. Popularly known as "the stimulus plan," the Act's stated goal is to re-employ or retain a large proportion of the Americans who've lost work to the current recession. As a result, recruiters and Human Resources staffs are struggling to determine how they can prepare to hire people the act will pay for through real money and tax incentives.

Sniffing out that information isn't easy. Indeed, even the agencies implementing the plan aren't entirely sure exactly how money will be distributed. Currently, federal agencies are working up their approaches, and posting weekly reports on the Web site www.recovery.gov. Most funds will be obligated by September 30, 2009. The law, weighing in at 407 legal-size pages with roughly 177,000 words, describes allocations department-by-department, office-by-office. One thing seems certain: Over the next 12 - 18 months, a bevy of consulting services is sure to emerge to help businesses digest and understand the Act's implications.

Dollars Lead to Jobs...

With \$111 billion to be spent in the broadly defined "infrastructure and science" category, it certainly seems IT people will have to be hired somewhere. The question is where.

Perhaps the best place to start looking is in the Fortune 500. According to *Fortune*, companies such as IBM regard stimulus funds being spent in the U.S. and other countries as a potential boon. "Executives figure a good portion of that money will fund projects like smarter electric grids, improved broadband services and digitized healthcare records - areas where IBM happens to market its technology and expertise," the magazine says. In particular, IBM has its sights on the \$8 billion allocated to high-speed railway projects and the \$19 billion set to digitize U.S. health records.

Meanwhile, the Information Technology and Innovation Foundation says more than 30,000 jobs are created for each \$1 billion of government investment in tech, roughly similar to projections for public works spending. "Information and communication technology "has larger economic impacts than other kinds of investment areas in the economy," the foundation's president, Robert Atkinson, told *Network World*. "If you invest in ICT infrastructure in an economic downturn, you not only get better short-term job creation effects but you get better long-term productivity impacts."

"There is a huge implementation phase to the adoption and use of



these kinds of technologies locally,” says John Irons, an economist and research director at the labor-oriented Economic Policy Institute, in the *New York Times*. “The jobs involved do tend to span the spectrum of skills and income levels. And they are not going to be outsourced offshore.”

One of the most hyped slices of stimulus tech spending is the multibillion-dollar effort to proliferate fast broadband service across the country. The theory is broadband, as an enabling technology, will have a multiplier effect, boosting business in this century the way railroads did in the 19th and interstate highways did in the 20th. According to the Brookings Institution, every percentage point increase of broadband penetration at the state level increases employment by 0.2 to 0.3 percent per year, which equals up to 300,000 American jobs.

... But What Kind of Jobs?

It’s important to note, however, that not all of those jobs will be IT jobs. While building broadband networks certainly requires technology professionals, more hands may be needed to manufacture components, lay cable in the ground or string it along utility lines, and install it in homes and offices.

In this paper, we define technology as “Information Technology.” Our reporting is focused on the stimulus package’s impact on the demand for professionals in hardware, software, networking, telecommunications and related areas.

In that sense, our definition is much narrower than the government’s. The American Recovery and Reinvestment Act defines technology broadly. So does the media, which includes in its discussion of “technology” jobs positions building solar energy systems, constructing smart electrical grids or laying communications lines. While these include IT components, often those represent a relatively small portion of the overall efforts.

Following the Money

“This once-in-a-lifetime flood of new technology money requires a new way of finding and following opportunities.”

-IDC

So what technology companies will benefit from the stimulus plan? Those who are proactive. “The IT vendor community must be both aggressive and agile in their strategy to capture this newly addressable market,” says research firm IDC. “This once-in-a-lifetime flood of new technology money requires a new way of finding and following opportunities. Due to the aggressive timeline, success will not come from the traditional business development via relationships and RFPs.”

Indeed, the timetable on \$499 billion in overall spending (the \$787 billion total includes the cost of tax cuts) is quick. Contracts, competitions, grants and cooperative agreements, agency plans and a flow of money from agencies to states is already underway.

According to IDC, technology opportunities will include:

- The Social Security Administration’s (SSA) National Computer Center data center modernization (\$500 million)
- SSA’s claims processing program (\$490 million)
- Department of Homeland Security data center, law enforcement communications (\$340 million)



- State Department security and network assurance technologies (\$290 million)
- Institute of Education Science's high-performance computing and predictive services (\$250 million)
- Department of Veterans Affairs data center and information technology services (\$50 million)
- Agriculture Department/Farm Services Agency data center and systems services (\$50 million)

In terms of technology, California will receive the most stimulus money, with Texas, New York, Florida and Illinois following behind.

On the ground, local VARs should find business installing and maintaining networked systems in medical practices, most of which are, essentially, small businesses.

For recruiters, this means you should start networking with VARs now.

What Recruiters Should Consider

Recruiters trying to determine how the stimulus package will impact their hiring plans need to determine which federal or state agencies are likely to be involved in funneling money to technology initiatives their companies are involved in. In this paper, we've outlined some of the law's major IT targets and described what's known about their timelines and expected focus.

- As we've noted, both the Act's language and media coverage often consider "technology" to be things far removed from IT. Much of the money earmarked for projects such as data center modernization may go to construction firms as opposed to IT specialists.
- Hardware, software, networking equipment and similar purchases will often be made on the local level, through agencies many small and medium-sized businesses are already familiar with. Many areas have wide flexibility in how they spend the funds. This means IT opportunities aren't always readily apparent. In education, for example, money from some stimulus programs can be used to maintain teacher salaries, thus avoiding layoffs, or for new computers and other equipment. How the funds are eventually spent is up to the local school board.
- The competition for talent, then, will often come from local companies who are positioned to take advantage of local projects. In an area like healthcare, companies such as Hewlett-Packard and General Electric are already positioning themselves to sell more of the systems they've already created, or have in the pipeline. On the ground, local VARs should find business installing and maintaining networked systems in medical practices, most of which are, essentially, small businesses.
- Funds are funneled through the federal government's departments, each of which is required to maintain a Web site dedicated to its recovery efforts. The sites offer information on funding, actions taken and planned for the near-term. You can find a listing of the sites [here](#), or on page 7.



Sectors Impacted

The following briefs are meant to provide some insight into how the American Recovery and Reinvestment Act's high-profile areas will impact technology, finance and security-cleared candidate demand.

Healthcare IT

In its approach to Healthcare IT, the stimulus plan seeks to develop a promising, technology-based approach to a chronic national challenge – modernizing the delivery of medical care around the country. Today, about 13 percent of U.S. physicians write prescriptions electronically, says the electronic-prescribing network Surescripts. Because of the stimulus plan, the research firm Visante expects that number to rise to 75 percent within five years. Already, 76 percent of retail pharmacies in the U.S. are equipped to receive electronic prescriptions.

It's not that doctors don't recognize the advantages of electronic prescriptions. Rather, they're deterred by its costs. The same is true for the adoption of electronic health records (EHRs), the electronic version of patient files stored in the rolling racks of a doctor's office. Basic economics dissuades many physicians from bringing their practices online. In addition to privacy concerns, unformed technology standards and an emerging regulatory environment, the economics of installing and maintaining EHR systems is significant for small practices, which comprise some 75 percent of the country's medical groups.

PC World estimates physicians must spend between \$20,000 and \$50,000 to get a system up and running, before training expenses. On top of that, physicians receive little in the way of economic return after incurring these costs. To address this roadblock, the stimulus package encourages the development of a market for EHR systems. Under the plan, the government will pay physicians limited annual incentives after they've purchased the systems, reducing their real out-of-pocket costs and lowering ROI.

Some \$17 billion will be used for these incentives, with physicians receiving theirs through bonuses to their Medicare reimbursements. Regardless of how much they spend on designated IT, each doctor can receive up to a total of \$44,000 in bonuses over five years, says the trade group CompTIA. Hospitals using EHR with Medicare and Medicaid will receive up to \$6 million a year in additional payments. However, the impact won't be immediately felt: The bonus funds don't become available until 2011.

Who stands to benefit? A number of big companies – like IBM and General Electric – are well-positioned through their existing efforts in healthcare IT. But smaller players – including niche solutions providers, VARS and local consultants who focus on serving small and medium-sized businesses – may find themselves in need of more professionals as standards are developed and e-health systems are installed.

Additional areas of Health IT stimulus spending include:

- \$2 billion for health technology grants, training initiatives and state programs, reports the Associated Press. This money, being disbursed by the National Coordinator for Health IT (part of the Department of Health and Human Services), is available immediately.



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- The Public Health Service will provide \$1.5 billion in grants to community health centers focusing on underserved populations. Some of this money may be used for purchasing and installing health IT systems. The details and timeline for this program are due to Congress in May 2009.
- The Indian Health Service will fund \$85 million of health IT activities, including telehealth services and related infrastructure. About 60 percent of the money will be spent in this fiscal year, 40 percent in FY 2010.

Broadband

The stimulus package provides \$7.2 billion in funding for broadband initiatives, with the overall intent of providing nearly every area of the country with high-speed Internet access. Included are \$2.5 billion in spending for distance learning, telemedicine, and the Broadband Program of the Rural Utilities Service (RUS), part of the Department of Agriculture. The other \$4.7 billion is designated for the Broadband Technologies Opportunities Program, which will be administered by the National Telecommunications Information Administration (NTIA) within the Commerce Department.

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That esoteric group of departments and acronyms has a huge job on its hands. Considering President Obama has dictated all of this money must be allocated by September 30, 2010, it's already off to a slow start. Seventy five percent of the RUS funds must be spent in rural areas that don't have sufficient access to broadband service. Priority will be given to systems that deliver end users a choice of two or more providers, and to projects that provide service to the highest proportion of rural residents without broadband access.

Don't expect the process to go smoothly: At the NTIA, only 20 grant officers are in place to hand out the \$4.7 billion through an expected 10,000 applications. The first of three rounds of grant funding is tentatively scheduled to take place this month (April 2009). NTIA will spend:

- \$1 billion on wireless broadband grants
- \$1.825 billion on broadband deployment grants
- \$350 million to track broadband availability and develop a Web-based broadband inventory map.

Most of this money is expected to buy hardware, software, and fund construction. The grant process is open: Even VARs can apply if they're a broadband-service or infrastructure provider with a program judged to be in the public interest.

Still being decided: the exact definition of "broadband." If advanced broadband is determined to mean 100 mbps, providers already working with fiber optic technologies will be favored. At the same time, 25 percent of the NTIA's grant money is targeted at "basic" broadband service (5 mbps download/1 mbps upload) in unserved areas. The rest would fund advanced broadband service in underserved areas. (It's up to yet another agency, the FCC, to decide how to define "unserved" and "underserved.")

Although much remains up in the air, it seems certain workers will be needed to manufacture, sell, and install fiber optic lines. Others will be deployed to the areas deemed "underserved" to get broadband networks up and running. Once established, the infrastructure



IDC Industry Insights anticipates the \$40 billion targeting the energy industry will stimulate approximately \$77.6 billion in technology spending.

will require maintenance and operational work. New jobs in the manufacture, sale, transport, and deployment of switches and routers are expected.

However, the Congressional Budget Office estimates much of this spending won't have an impact for several years. Some projects are expected to require up to seven years to complete, meaning the first phase of this stimulus area won't be finished until 2016.

Energy (including 'Green IT')

IDC Industry Insights anticipates the \$40 billion targeting the energy industry will stimulate approximately \$77.6 billion in technology spending. The energy initiatives that will experience the most growth will be related to intelligent grids, renewable energy, and energy efficiency.

The single biggest tech-centric expenditure in the energy category is \$11 billion to "modernize" the electric grid, making it "smarter" by improving communication so electricity can be distributed and used more efficiently. Analysts expect plenty of call for electrical engineers, and the Labor Department will spend hundreds of millions of dollars to retrain workers in high-growth and emerging energy sectors.

While no direct estimate of IT jobs to be created by smart-grid efforts is currently available, consider this: In January 2008, the trade group GridWise estimated 278,000 jobs would be created between 2009 and 2012 if \$16 billion was spent on smart-grid initiatives. A subset of these – 117,700 jobs – would be created among "supply chain providers whose equipment would be procured and deployed by utilities." A subset of *these* would include "software system providers and integrators."

As efforts proceed to develop the smart grid, we expect demand to increase for IT professionals with experience at utilities, energy companies and their vendors.

Security

Ever since the Department of Homeland Security was created, the government has spent billions on efforts to improve national security. The stimulus plan provides another round of funding to technology-related security projects.

For example, the Justice Department will award an additional \$200 million in Byrne Formula Grants. Used by state and local governments to improve the functioning of the criminal justice system, these funds can be spent on technical assistance or information systems. Another provision budgets \$200 million for a law enforcement wireless communication system that will work across all federal agencies.

Other initiatives include:

- Department of Homeland Security: Non-intrusive detection technology at sea ports (\$100 million)
- Department of Homeland Security: Repair and construct inspection facilities at land borders (\$150 million)
- Department of Homeland Security: Explosive detection

systems and checkpoint technologies at airports (\$500 million)

- Department of Homeland Security: Communications devices and radio within Immigration and Customs Enforcement (\$27.8 million)
- State Department.: Design and construction of a State department backup information management facility in the U.S. to support mission-critical operations and projects abroad (*\$150 million*)
- State Department: Cybersecurity initiative (\$98.5 million)



One easy way to look for technology opportunities in the stimulus package is simply to search for the word “infrastructure.”

Science

Scientific research should benefit from the plan, with more than \$21 billion to be spent across the board on science and research projects, all of which will require technology infrastructures. A full \$8.5 billion is headed for research into cancer, Alzheimer’s disease, heart disease, and other medical issues. Also:

- The National Oceanic and Atmospheric Administration will receive \$830 million for satellites, climate sensors, and climate data modeling.
- The National Science Foundation receives \$2.5 billion for basic research.

Education

The plan sets aside billions for educational initiatives, including \$650 million for school technology modernization projects. Modernization can include upgrading or installing educational technology, wiring a school, acquiring hardware or software, or acquiring fiber-optic, cable, or satellite equipment. Ultimately, local school districts have a large say in how much money will be spent on IT-related initiatives, and who will be hired to do the work, either as school employees or contractors.

Additional Areas:

- One easy way to look for technology opportunities in the stimulus package is simply to search for the word “infrastructure.” Anywhere the word is used, technology will surely play a role, whether it’s in the \$2 billion for renovations and upgrades at community health centers, the \$4.2 billion for making military facilities “more efficient,” the \$4.6 billion going to the Army Corps of Engineers, or the \$1.2 billion for veterans’ hospitals.
- More spending may be called for by the Commission on Cybersecurity for the 44th Presidency, a bipartisan effort that has recommended President Obama set up a high-level post to increase IT security and counter cybercrime, citing intrusions within the computer systems at the Departments of Defense, State, Homeland Security, and Commerce.
- While it may not be as sexy as counterespionage, there will be a huge growth market in compliance. Given the financial meltdown, the Obama administration and the Democratic majority in Congress are sure to demand greater regulation of businesses. Regulation requires records, and records require networks and electronic storage for compliance.



U.S. Agency Recovery Web Sites



Name of Agency	Recovery Site
Agency for International Development (USAID)	View Site
Corporation for National and Community Service (CNCS)	View Site
Department of Agriculture (USDA)	View Site
Department of Commerce (DOC)	View Site
Department of Defense (DOD)	View Site
Department of Education (ED)	View Site
Department of Energy (DOE)	View Site
Department of Health and Human Services (HHS)	View Site
Department of Homeland Security (DHS)	View Site
Department of Housing and Urban Development (HUD)	View Site
Department of Justice (DOJ)	View Site
Department of Labor (DOL)	View Site
Department of State (DOS)	View Site
Department of the Interior (DOI)	View Site
Department of Transportation (DOT)	View Site
Department of Treasury (TREAS)	View Site
Department of Veterans Affairs (VA)	View Site
Environmental Protection Agency (EPA)	View Site
Federal Communications Commission (FCC)	View Site
General Services Administration (GSA)	View Site
National Aeronautics and Space Administration (NASA)	View Site
National Endowment for the Arts (NEA)	View Site
National Science Foundation (NSF)	View Site
Office of Personnel Management (OPM)	View Site
Railroad Retirement Board (RRB)	View Site
Small Business Administration (SBA)	View Site
Smithsonian Institution (SI)	View Site
Social Security Administration (SSA)	View Site
US Army Corps of Engineers (USACE)	View Site

Source: Recovery.gov

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