

Center for American Progress



doing
what works



Securing Our Borders

Doing What Works to Ensure Immigration Reform
Is Complete and Comprehensive

Chuck McCutcheon April 2010



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This publication is a product of CAP's Doing What Works project, which promotes government reform to efficiently allocate scarce resources and achieve greater results for the American people. Doing What Works specifically has three key objectives: (1) eliminating or redesigning misguided spending programs and tax expenditures focused on priority areas such as health care, energy, and education; (2) boosting government productivity by streamlining management and strengthening operations in the areas of human resources, information technology, and procurement; and (3) building a foundation for smarter decision making by enhancing transparency, performance measurement, and evaluation. Doing What Works publications and products can be viewed at http://www.americanprogress.org/projects/doing_what_works.

The Center for American Progress Immigration Policy and Advocacy

The Center for American Progress sees immigration policy and the integration of immigrants into our increasingly diverse nation as a key element of our progressive strategy. As a leader in the national campaign to enact comprehensive immigration reform, CAP's immigration team focuses on developing and building support for progressive immigration policies that advance our economic, security and moral interests. CAP views immigration as a national resource to be embraced but regulated, and immigrants as a source of economic and cultural vitality. CAP's immigration team is headed by Angela M. Kelley, Vice President for Immigration Policy and Advocacy.

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Introduction and summary

Securing our border with Mexico—the main crossing for undocumented immigrants into the United States—is a vexing challenge. Technology—in the form of a “virtual fence” of sensors, cameras, motion detectors, and other sophisticated equipment—is considered to be of the utmost importance in stemming illegal immigration. But problems have plagued the effort for more than two decades, raising questions about whether it can be done effectively.

The outgoing Bush administration last year bequeathed to the incoming Obama team a border security program replete with vast technology problems accompanied by outrageous cost overruns and missed deadlines by the main contractor on the project, Boeing Co. Sadly, the Bush administration proved it had learned little from earlier failures to control undocumented immigration along the border stretching back more than a decade, and showed it had a poor handle at best on government contracting at the then-new Department of Homeland Security. This left the Obama administration’s new team at DHS with a decision about whether to fix the persistent known problems piled high with new ones added by the Bush team or to try something different.

In March 2010, DHS reached a pivotal moment in determining future border enforcement and surveillance policy. Signaling its discontent with the mismanaged, cost-overridden technological component of its border enforcement strategy, DHS froze work on the “virtual fence” along the U.S.-Mexico border pending a full assessment of its usefulness. At the same time, DHS Secretary Janet Napolitano ordered the redeployment of \$50 million of Recovery Act funding to other “tested,” commercially available security technology, including mobile surveillance, thermal imaging devices, ultra-light detection, backscatter units, mobile radios, cameras and laptop computers for pursuit vehicles, and remote video surveillance system enhancements.¹ “Not only do we have an obligation to secure our borders, we have a responsibility to do so in the most cost-effective way possible,” Napolitano said.²

Starting over, at first glance, would probably be appealing. The U.S. Government Accounting Office, or GAO, has issued more than half a dozen critical reports of DHS’s Secure Border Initiative, or SBI, the program aimed at controlling undocumented immigration and major drug trafficking operations primarily along the U.S.-Mexico border but also across the United States.³ Meanwhile, between fiscal years 2005 and 2009, more than \$3.7 billion was spent on SBI. The initiative called for:

Secure Border Initiative

Secure Border Initiative (SBI) is a comprehensive plan to control our borders and stem the flow of illegal immigration through an integrated mix of increased staffing, more robust interior enforcement, greater investment in detection technology and infrastructure, and enhanced coordination on federal, state, local, and international levels.

A critical component of the SBI strategy is SBI-net, a program focused on transforming border control through technology and infrastructure.

- More agents for U.S. Customs and Border Patrol and U.S. Immigration and Custom Enforcement agencies under DHS
- Expanded capacity to detain and remove undocumented immigrants
- Increased enforcement at worksites, stepping up fugitive operations, and updating contracts with state and local law enforcement agencies
- Upgrading ports of entry and enhanced spending on steel fencing along the border
- Building a “virtual fence” under the so-called SBI-net advanced technology program to increase the detection of illegal trafficking of narcotics and people

This last component, SBI-net, quickly became the one most beset by difficulties.

SBI-net was intended to improve security between ports of entry and where the physical fencing is not in place by installing remote video surveillance camera systems and sensors and adding aerial assets such as Unmanned Aerial Vehicles. Boeing, a major defense contractor and commercial airplane manufacturer, was picked by DHS’s Customs and Border Protection in September 2006 to lead SBI-net. Boeing beat out three other large defense contractors—Lockheed Martin Corp., Northrop Grumman Corp. and Raytheon Corp., as well as Ericsson Inc., the Swedish telecommunications giant—to win a three-year contract with three additional one-year options, despite misgivings about its lack of experience with border control issues. The worries about Boeing were prophetic. Just before Napolitano’s recent decision to reassess SBI-net, DHS estimated the “virtual fence” would be fully deployed along the southwest border in 2016—more than a decade after it was first announced and seven years after the original contract for the program expired.⁴

The GAO reported last year that SBI-net’s delays required DHS to rely on existing equipment, rather than using newer technology. The more modern equipment suffers from numerous problems, including poor camera clarity in bad weather and mechanical failures with radar that leave it unable to spot intruders.⁵ Federal auditors followed up in March with an even more damning report, observing that from March 2008 to July 2009, more than 1,300 defects were found in the SBI-net system, and new problems were being discovered at a faster rate than repairs could be made. Additionally, about 70 percent of the procedures to test the system were rewritten as they were being executed, prompting a letter from DHS to Boeing that asserted that testing changes appeared to be designed to pass the test rather than qualify the system.⁶

While DHS has been challenged to improve its oversight over Boeing, it also has missed some of its own deadlines, particularly those surrounding the troubled SBI-net. Mark Borkowski, the DHS official in charge of the project, acknowledged at the start of

2010 that he would be unable to meet a promised March 2010 deadline to the House Appropriations Committee for turning over an initial portion of the project in Arizona to the Border Patrol.⁷ In its most recent audit in March 2010, GAO stated that the long-delayed first two “blocks” of the system are now scheduled to be handed over to the federal government this fall, if Customs and Border Protection approves the timeline.⁸ “At the current rate of 28 miles of SBInet technology every 4.5 years, it would take 320 years—or until the year 2330—to deploy SBInet technology across the Southwest border. That statistic would be comical if the subject matter were not so serious,” said Rep. Henry Cuellar (D-TX), chairman of the Subcommittee on Border, Maritime, and Global Counterterrorism, during a hearing to receive GAO’s study.⁹

Other members of Congress and some experts in the fields of homeland security and technology also are openly skeptical that a solution is coming soon. “It is hard to be optimistic,” said Rep. Mark Souder (R-IN) at a September 2009 hearing. And when Rep. Christopher Carney (D-PA) asked at the hearing if the taxpayers have gotten what they paid for, a senior GAO official responded: “No.”¹⁰

Nor are DHS border challenges exclusively technological. The department also is charged by Congress with building a physical fence covering one-third of the 2,000-mile border with Mexico—an ambitious project, the costs of which have risen from \$3.5 million a mile to \$6.5 million a mile. A separate form of fencing aimed at keeping out vehicles also has risen in cost, from \$1 million to \$1.8 million per mile, and GAO officials say the impact of both types of fencing has not been adequately measured.

“We have yet to see whether or not this fencing has increased border security and justified its costs,” says Rep. Loretta Sanchez (D-CA), the past chair of the House Homeland Security Committee’s panel on border issues.¹¹ Those concerns also have been shared by many members of Congress, as well as Napolitano, who first opposed the fence while serving as governor of Arizona, a position she held before being named DHS secretary.

Even though the Obama administration has worked around the prominent SBI setbacks and pushed forward with increased staffing, major construction, and revised detention and removal procedures, the focus on the costly border fences and SBInet play into the political hand of opponents of comprehensive immigration reform.¹²

Congress received in February the Obama administration’s proposed budget for Fiscal Year 2011, which included a severe funding cut for SBI, budgeting \$574.17 million, down from \$800 million it got the previous year.¹³ No one expects the physical fence alone can keep out illegal immigrants, which is why SBInet remained so important despite its numerous failures to meet the benchmarks for success that it promised at its start in 2005. Questions from Congress and government auditors regarding the usefulness of the physical and “virtual” barriers erected along the southwest border will continue.

By restoring order
to our nation's
chaotic and broken
immigration system,
DHS' operational
control of the
Mexican border will
be enhanced.

This is the challenge facing the Obama administration and DHS. “2010 is a crucial year” for SBInet, Richard Stana, the top GAO official overseeing border issues, told an El Paso television station. “If it doesn’t work in 2010, then there’s going to have to be some serious thinking about where to go, and what other options exist.”¹⁴

“I hope the department is working on a Plan B,” Cuellar said as he pushed for some form of a technology strategy during the March congressional hearing, “because those of us along the border have waited long enough for a security solution that works.”¹⁵

So is the SBI program, and especially SBInet, salvageable? Or more to the point, after so many years and so many dollars invested in this project, have we learned enough about what went wrong that we can create a credible border policy around what now exists alongside what we know needs to be fixed? To examine border security infrastructure, the Center for American Progress interviewed lawmakers, congressional staffers, DHS and local government officials, as well as homeland security, immigration and technology experts, reviewed transcripts of congressional hearings, and visited the Texas border.

We come away from our investigation aghast at the serial failures in the SBI program but also confident that parts of what exists are in fact salvageable and that what we’ve learned will help our country create a working border policy. We will detail our reasons for these conclusions in the main body of the paper, but the upshot of our investigation is that CAP does not support scrapping the concept of border security technology (using cameras, sensors, and other elaborate tools to monitor illegal border crossings) but the Obama administration and Congress must incorporate lessons learned from SBI’s repeated failures. Those range from greater cooperation on technology issues with Mexico to viewing enforcement as a two-way challenge with stepped-up inspections of traffic leaving the United States so that the recovery of smuggled cash and other proceeds can fund the ongoing technological upgrades that will be required.

Most importantly, these efforts must be accompanied by the enactment of comprehensive immigration reform, which would create orderly migration channels and allow the border patrol to focus on smuggling and other criminal enterprises. By restoring order to our nation’s chaotic and broken immigration system, DHS’ operational control of the Mexican border will be enhanced.

As part of the Center for American Progress’ “Doing What Works” project, this paper concludes that while SBI’s performance has been dismal, an advanced technology program can reach SBI’s key goals if multiple corrective measures are taken. By upgrading human resources and procurement practices, harnessing new technology, and setting up transparent, evidence-based operations, DHS can restore confidence in the overall SBI program and produce budget savings. The study proposes 10 reforms for SBI, in general, and a sharply re-defined technology component:

- **Congress should address border security through comprehensive immigration reform legislation.** As Napolitano said at CAP last year, current laws do not provide what DHS needs “to do its job as effectively as possible,” and comprehensive immigration reform is required to expand its enforcement strategies. Specifically regarding border issues, a new law could reduce the inflow of illegal immigrants and lessen the constant pressure on border technologies, while also creating new revenue streams to fund technology upgrades.¹⁶
- **Continue to pursue technological solutions.** Technology remains important to securing the border, and the general concept of fences, cameras and sensors can work if they are successfully integrated with each other.
- **Reach out to local communities.** Border towns need to be brought into the discussion. Though the Border Patrol does outreach as part of its day-to-day operations, it should ensure those efforts include SBI or whatever may follow if the current SBI program is dismantled. In particular, law enforcement officials in communities near the fence must get greater attention in addressing border security—not just through vehicles and other equipment, but through funding that can boost staffing levels at busy jurisdictions.

Map of Border Patrol sectors and location of the border fence and SBInet



- **Collaborate with Mexico on border security.** Greater efforts should be made to bring Mexico, the country that is the primary source of illegal immigrants, into the planning process. One proposal worth considering would form a Binational Border Authority with a joint budget and staff and address issues stretching beyond law enforcement and security.
- **Draw on the expertise of academia and industry to shape a long-term border security blueprint.** Colleges and universities are studying various border security models that may highlight innovative solutions.
- **The federal government should maintain tight control over the performance of contractors and agencies, while setting schedules with the understanding that they may need to be adjusted.** Potential problems with contracts and contractors should be dealt with before they become issues to be discovered by outside investigators and auditors.
- **Allow a wider variety of businesses, including small technology companies and unsuccessful SBI bidders, to join in solving border security problems.** Innovative ideas often come from small firms.
- **Improve interagency communications and planning and maintain flexibility in technology design.** DHS's ongoing review of the SBI program should consider recommendations for improving inter-agency communications, planning, and development so that potential problems are identified earlier in the process.
- **The federal government should consider a more "horizontal" approach in which a single type of technology is implemented over a broad area.** Given early technology failures, a "walk before you run" approach that gradually applies the tools along the border will have more success than hurriedly installing all of the work in a limited area.
- **Improve the viability and performance of border technology programs.** Additional funding should be given only after the project is ready to build out. We suggest that the agency use CAP's recommendations as a template for beginning to repair what is broken, including adding transparency and accountability of the project. If, after careful review, DHS and Congress determine the program is salvageable and should proceed, then Congress should create additional revenue streams.

In the pages that follow, this report will detail the legacy of border enforcement problems stretching back to the 1990s, examine in detail what went wrong, and then present our recommendations of what must be done to fix the problems. We'll repeat this analytical exercise when we look at our ineffective border controls, the misguided government contracting work under the Bush administration, particularly productivity and project-management breakdowns, and more recent problems that are surfacing since the Obama administration took office. In the end, we believe our recommendations about what must be done about border controls and immigration will persuade Congress and the Obama administration to act this year on this critical problem confronting our nation.

Applying the lessons across government

The problems and challenges experienced by the SBI program over the past decade are not unique to this program. There are also broad lessons to be learned from this experience about how to effectively implement large programs. A broader view of the planning, implementation, and management of SBI offers lessons that can be applied to large government projects now or in the future.

The first lesson: Develop a clearly articulated vision both internally and externally. The program's vision and objectives should align with the agency's mission or authorizing legislation. It should also be well communicated within the agency, inside the government, and beyond. Through peer and public review, appropriations levels should reflect program goals to secure a program. Case in point: Three years after the unveiling of the SBI program and objectives, key aspects of the SBInet program were ambiguous and in a chaotic state, making it difficult to determine which technological capabilities were to be delivered and when, according to a GAO report in September 2008.¹⁷ In a March 2010 report that focused on the management of testing procedures for SBInet and what the test results showed, GAO concluded, "DHS has not effectively managed key aspects of SBInet testing, which has in turn increased the risk that the system will not perform as expected and will take longer and cost more than necessary."

The second lesson: Determine which solutions are likely to be most effective in accomplishing the vision, including technological and other options, and accurately measure their viability. Think broadly about the different options that can be employed to promote the program's goals. Technological solutions are likely to be but one part of a plan that succeeds. Case in point: Well into the development of the SBI program and its SBInet component in 2009, CBP had measured the miles of tactical infrastructure constructed and offered an analysis showing where fencing is more appropriate than other alternatives, such as more personnel. But the conclusions were based on the subjective judgment of senior Border Patrol agents, costing the project valuable credibility.¹⁸

The third lesson: Involve a range of interested parties and stakeholders from the outset. Increased collaboration with interested parties results in greater innovative ideas and solutions. Local communities, neighboring countries, universities, and the private sector can offer valuable insight and perspective throughout the process. Their buy-in can also be integral to the success of the program. Case in point: On the U.S.-Canadian border, researchers have found evidence that the history of international cooperation between British Columbia and Washington state through formal institutions such as the Pacific Northwest Economic Region economic development group has helped foster a collaborative culture.¹⁹

The fourth lesson: Set realistic goals, budgets, and timelines, not letting them be dictated by political expediency. Even a poor political decision may result in a productive program if project planning includes room for interagency communications and design flexibility. Case in point: DHS rushed to hire Boeing as a primary contractor for SBInet without fully considering its capability to carry out the project, largely because of enormous pressure from conservatives in Congress to move boldly and quickly in border enforcement. That led to unrealistic goals and poor management.

The fifth lesson: Monitor progress vigorously to build confidence in the work and be prepared to be flexible where necessary to accomplish the goals. The key to a successful project is the maintenance of tight control over the performance and spending of contractors and agencies so that intermediate deliverables are completed in functioning order, on time, and on schedule. Case in point: SBInet is a prominent example of how not to do a major project. Not only was it inflexible where it should have been flexible, its lax control over performance and spending has left auditors and other key officials questioning whether any of its parts are salvageable, or are instead a giant waste of taxpayer dollars.

Breakdown in operations

The Border Fence and the Border Patrol

Government efforts to take a comprehensive approach to controlling the borders date back to before Congress created the Department of Homeland Security in 2003. Sensors and cameras have been in place in some areas for decades. In 1994, the Border Patrol began “Operation Gatekeeper,” in which tiers of agents were assigned to patrol various points around the San Diego sector. But the high costs of such isolated programs eventually made clear to immigration officials and Congress the need for a comprehensive approach—specifically through integrating manpower, more sophisticated fences and new technologies. Congress in 1996 passed the Illegal Immigrant Reform and Immigrant Responsibility Act, giving the government broad authority to install additional physical barriers.²⁰

The fence met with resistance from officials and residents in border communities who argue (then as now) that it unnecessarily cuts economic ties with Mexico and provides little security. Texas rancher Bill Moody, whose vast ranch covers 35 miles of frontage along the Rio Grande and was the location for the “Lonesome Dove” television film, was an early critic of the fence. “We darn sure don’t need a wall. Everybody knows the Great Wall of China wasn’t worth a damn.”²¹

U.S. Customs and Border Protection—a primer

Within the Department of Homeland Security, U.S. Customs and Border Protection is the lead agency charged with securing the borders. CBP is charged with overall border enforcement, but within the bureau a distinction is made concerning border enforcement at and between ports of entry. At ports of entry, CBP officers are responsible for conducting immigration, customs, and agricultural inspections on individuals presenting themselves for entry into the United States. Between ports of entry, the CBP’s border patrol agents are charged with detecting and preventing the entry of unauthorized non-citizens into the country, and interdicting drug smugglers and other criminals.

Research by Wayne Cornelius, director of the Center for Comparative Immigration Studies at the University of California-San Diego, shows that 97 percent of illegal entrants who are unsuccessful in their initial effort to get across a border fence make it over on their second or third attempt. And Rep. Raul Grijalva (D-AZ) complained that the fence “began as political symbolism, and really hasn’t grown out of that.” Indeed, the costs of hauling concrete and other building materials to remote locations, as well as a shortage of construction labor and unresolved land acquisition claims, helped continually drive up costs.²² Nevertheless, fence supporters, including some of the fiercest critics of comprehensive immigration reform that would expand visa programs for immigrant workers and their families, argued that the barricades were effective enough to warrant an expansion. In 2006, strong majorities in the House of Representatives and the Senate voted to authorize the construction of two-layered reinforced fencing and additional physical barriers, roads, lighting, cameras, and sensors along five stretches of the Southwest border.

The Congressional Research Service estimated in 2007 that the overall costs of construction and maintenance of the barrier during its quarter-century lifetime will total as much as \$49 billion.²³ GAO notes that fencing mile costs have risen over the course of construction—from \$3.9 million to \$6.5 million per mile for pedestrian fencing and from \$1 million to \$1.8 million per mile for vehicle fencing. The initial plan was to have all of the fencing in place by the end of George W. Bush’s presidency in early 2009. The mandate was adjusted in 2007 when Congress agreed to give DHS greater latitude in determining how much and what type of fencing should be deployed sector by sector. The amount of fencing was reduced from around 850 miles to less than 700. DHS planned about 370 miles of pedestrian fencing—mostly single-layer fences to deter foot traffic—and about 300 miles of vehicle fencing barriers in remote areas. Approximately 650 miles of fencing has been built.

The fence proved to be more about political posturing than about smart policymaking, as evidenced by recent audits that documented its high costs and questioned its effectiveness. The fence was never intended to run continuously along the border—geographical and landowner restrictions were part of the calculation—but it has not been completed even in areas where it was planned, escalating concerns of nearby residents on the U.S. side of the fence.

In one short 50-mile strip along the Rio Grande between the southwest Texas towns of Del Rio and Eagle Pass, for example, the fence barely extends beyond either side of the port of entry on the Del Rio side of the international bridge. Where the steel fencing ends, lower wobbly barbed wire fencing that can easily be jumped begins, at or near residential neighborhoods with mobile homes and mansions. Residents report increased foot traffic, burglaries, and an escalation of noise from federal river patrols, air surveillance, and Border Patrol vans. “It kind of makes you wonder, what was the point” of the fence, quips Jo Ann Choate, a 62-year-old resident on the banks of the Rio Grande.²⁴

SBI funding, fiscal years 2005-2009

Dollars in thousands

Fiscal year	SBI funding
2005	\$38,480
2006	325,000
2007*	1,187,565
2008	1,302,587**
2009	875,000***
Total	\$3,728,632

Source: CBP budget data and DHS’s annual appropriations acts.

* Department of Homeland Security Appropriations Act, 2007, Pub. L. No. 109-295, 120 Stat. 1355, 1359-60 (2006). SBI funds from this appropriation act are no-year dollars, meaning they do not expire at the end of a given fiscal year.

** Includes approximately \$77.6 million of reprogrammed funds from other DHS accounts, plus \$1,225 million appropriated through the Consolidated Appropriations Act, 2008, Pub. L. No. 110-161, 121 Stat. 1844, 2047-49 (2007). SBI funds from this appropriations act are no-year dollars.

*** Includes \$100 million from the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, 162, 302 (2009), which expires at the end of fiscal year 2010, plus \$775 million appropriated through the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009, 122 Stat. 3574, 3655-57 (2008), which are no-year dollars.



Improvements at land ports of entry like this one in Texas include new technology to track automobile licenses, personal identifications and cargo.

University of Texas-Brownsville professor Jeff Wilson notes that the fence disproportionately affects the poor as wealthy neighborhoods are able to fight to keep the border fence off of their land, thereby maintaining high property values. And in fact the fence already boasts gaps in places where the wealthy live. Wilson cites an encounter he once had with dozens of armed agents at a country club in Cameron County in South Texas. A suspected drug smuggler had driven a black Suburban into the Rio Grande and had swum to Mexico. “And yet, the fence stops at the country club,” he said.²⁵

Border fence critics, such as Eagle Pass Mayor Chad Foster, argue the project has been wrongly portrayed as a final solution. “We’re conveying a false sense of security to Middle America with the fence,” says Foster, who heads a coalition of border-town mayors who asked DHS officials to let them have more input into the project.²⁶

Yet it’s clear that since some areas of the fence have gone up, the number of illegal immigrants apprehended has dropped. In the Border Patrol’s Tucson sector covering Arizona, which has been the most trafficked in recent years by undocumented immigrants, the 241,600 apprehensions during fiscal year 2009 marked a 10-year low.

But the lower number of arrests also is related to the depressed U.S. economy and lack of work opportunities for migrants to the United States. At the same time, those still making the trek are at an increased risk of dying as they are funneled into more remote and perilous areas by the presence of the border fence. In the entire Tucson sector, there were 88 known deaths per 100,000 apprehensions in fiscal 2009—a significantly higher total than in each of the previous five years.²⁷

In addition to mandating the fence, lawmakers authorized more agents for the Border Patrol. Congress appropriated more than \$800 million in fiscal 2008 and fiscal 2009 for hiring, training, and deploying thousands of new agents. But the rapid increase of new

hires overwhelmed the system. The GAO found that the agency's ratios of agents to supervisors went from the normal 5-to-1 level to 11-to-1, increasing its forces to more than 20,000 officers.

Though the federal workforce has grown and the Border Patrol presence on the border is noticeably larger, local law enforcement officials say they still need more manpower to do their part in fighting drug trafficking and illegal immigration. If the choice is between new technology and equipment or boots on the ground, Val Verde County, Texas, Sheriff Joe Frank Martinez, for example, pleads for more deputies in his department. Federal funds have paid for plenty of new vehicles and other equipment, but he says that is not enough for him and his neighboring county sheriffs, who have a lot of ground to cover with limited manpower. "They talk about putting more boots on the ground, but the problem is that it's the same pair of boots," he says. "You know, they get worn down, they get tired."

Martinez adds that federal funds already have paid for plenty of new vehicles and other crime-fighting tools. Val Verde County, where Del Rio is located, formally requested funding to hire six new officers as part of the \$787 billion federal stimulus package approved in early 2009 but did not receive any. But Arlington, Texas, home of the Dallas Cowboys' new Texas Stadium in the north-central part of the state, got 31 additional positions, all of which were assigned to provide enhanced security at the new football stadium.²⁸ "Is it because they built the stadium?" he asked pointedly. "You know, here we are talking about homeland security. This is the front line. We need to hold what we have here."²⁹

While there is broad political agreement that tougher border enforcement requires more manpower and additional agents, there also is wide consensus that current staffing is far from enough when it comes to protecting the border. "The metrics that Congress has established and that we politically fixate on—'How many Border Patrol agents have we hired?' or 'How many miles of fence did you build?'—are kind of useless," says Jim Carafano, a homeland and national security expert at the conservative Heritage Foundation.³⁰ In a separate paper, he writes: "While there has been much emphasis on building walls and having guards to patrol the border, that alone is not the answer. A 'static' defense cannot keep up with a 'dynamic' enemy that is always thinking of new ways to cross the border."³¹

In Washington, officials are struggling to find the right balance, between giving more money to local law enforcement agencies for increased manpower and buying equipment for new vehicles and immigration checkpoints for the increased Border Patrol personnel. Former Border Patrol Chief David Aguilar (currently acting deputy commissioner of Customs and Border Protection) has implored Congress to pay more attention to adding equipment instead of just employees. "In order to make the agents that we have hired over the last couple of years ... more efficient, more effective, we need to balance those out with the infrastructure," Aguilar told the House Homeland Security Committee's border security panel in May 2008.³²

"While there has been much emphasis on building walls and having guards to patrol the border, that alone is not the answer. A 'static' defense cannot keep up with a 'dynamic' enemy that is always thinking of new ways to cross the border."

This dilemma underscores the need for the SBInet program, which was intended to strike that balance by applying “virtual fence” technology where steel fences and agents could not block or detect humans illegally crossing the border.

What went wrong

Apart from its obvious physical gaps, the border fence leaves too much of an impression that a fence alone can “solve” U.S. border security problems. It also is a source of antagonism for people on both sides of the border. In addition, although local law enforcement officials in communities near the fence have received funding to pay for vehicles and other equipment, they continue to have manpower needs as they struggle to be an effective partner with the federal government. It appears their expertise has not always been adequately tapped.

The failure to consult the Border Patrol in SBI’s initial stages has already been cited by DHS officials as a serious management error. The hiring of so many new agents also was not done in proper coordination with the development of the technologies they will be using. Given the substantive challenges that border security presents, the Border Patrol should not operate in a vacuum.

What should be done

Enact comprehensive immigration reform

Putting aside all other questions that make the topic an emotional hot-button issue, an immigration reform law would improve border security in general and the Border Patrol in particular. As scholars Christopher Bronk and Tony Payan point out in a recent report for Rice University’s James A. Baker III Institute for Public Policy, such reform would help secure the border “because the security task will be simplified if the large number of relatively benign job seekers [from Mexico] are removed from play in the border security mission.”

If some form of worker programs were implemented, it could take care of more than 90 percent of undocumented visitors, the two scholars estimate, thus freeing up resources to enhance overall border infrastructure and make legal crossings easier.³³ Former Immigration and Naturalization Service Commissioner Doris Meissner, now a senior fellow at the Migration Policy Institute, agrees that such legislation “would help in that it would reduce the pressure coming over the border.”³⁴

CAP’s principles for comprehensive immigration include establishment of smart enforcement policies aimed at disrupting drug and human trafficking. Immigration reforms also would install stiffer penalties against employers who violate labor laws, and an employment verification system that meets accuracy and privacy benchmarks to protect workers.

Such reform would help secure the border “because the security task will be simplified if the large number of relatively benign job seekers [from Mexico] are removed from play in the border security mission.”

The enforcement strategy would be combined with new flexible visa channels to meet economic and family needs to replace the current limited system that encourages undocumented entries and visa overstays. Any new immigration law also must include a tough, fair and practical program to resolve the status of the almost 11 million undocumented immigrants in the United States.

Don't abandon a technological solution

First of all, since work on the fence is nearly completed, it makes little sense to abandon what has already been built. More broadly, the Center for American Progress argues that the Secure Border Initiative presents extremely complex challenges, but the concept of a high-technology networked border security system using proven off-the-shelf technology that can eventually be replaced by more advanced systems remains doable.³⁵ The program must be heavily augmented with dependable security technology adhering to the general concepts of SBInet because virtually no one believes the fence alone is enough, but there is general agreement that the concept is essential.

“We need good technology to help funnel people to places where our human assets will be to stop them from entering our country,” Rep. Sanchez said.³⁶ “All of it has to work. And it has to work together—the virtual part of it has to work, because I’m not going to put a man every 200 yards on the border,” Sanchez added. “When all these other people are coming across, it’s like trying to find a needle in a haystack. If I get rid of the haystack, it’s much easier to find the needle. Getting rid of the haystack is about comprehensive reform.”

As the Border Trade Alliance, a business group supporting international trade with Mexico, said in a March 2010 letter to DHS Secretary Napolitano urging continued work on a virtual fence: “We believe that technology holds great promise for securing our borders by acting as a force multiplier for our understaffed border agencies without having to devote hundreds of millions of dollars to physical barriers of dubious effectiveness.”³⁷

Reach out to local communities

Because technology is rarely a panacea to any public policy problem, border towns need to be brought into the discussion. A bipartisan task force on immigration and the United States’ future, in a 2006 report, said veterans of earlier failed border endeavors agreed the Secure Border Initiative will only succeed “through better dialogue among the key parties ... The goal should be to clarify a strategy where all stakeholders—public and private—agree on the problem to be solved, the metrics that can measure progress and success, and the technology solutions most likely to achieve measurable results.”³⁸

“The reality is we don’t have enough technology on the Mexican side of the border. “If we mirror the technology being used in the United States, then we can be more efficient in this war.”

Although the Border Patrol does local outreach as part of its day-to-day operations, it should ensure those efforts also include include key planners, program officers and contractors who are involved in the SBI program. Experts agree that the project will function better if there are human relationships on both sides of the border and up and down the federal, state, and local law enforcement chain.

In particular, law enforcement officials in communities near the fence must get greater attention in addressing border security—not just through vehicles and other equipment but through funding that can boost staffing levels at busy jurisdictions, too. They must also be made a partner in consultations with DHS to ensure smooth and effective planning in the future. After all, these communities will remain on the front lines even after the physical and virtual fences are in place and the flow of undocumented immigrants slows and will be engaged with Mexican communities across the border. Local communities in Texas, New Mexico, Arizona, and California will remain important eyes and ears on the ground.

Homeland Security officials say they held dozens of meetings and contacted almost 600 different landowners in the course of building the fence. They said it resulted in several important changes to the fence’s alignment. Those outreach efforts should be expanded; one possibility is through the DHS Homeland Security Advisory Committee’s Southwest Border Task Force, which is currently made up of more than 20 elected and non-elected officials from around the border region.

Collaborate with Mexico on border security

Because of the angry feelings generated by the fence, and by the current U.S. approach to immigration, greater efforts should be made to bring Mexico—the country that is the primary source of undocumented immigrants—into the planning process. And Mexican officials who have sought to secure their border relying on manpower are eager to help. “The reality is we don’t have enough technology on the Mexican side of the border,” explains Jose Luis Santiago Vasconcelos, Mexico’s deputy attorney general for judicial and foreign affairs, told a U.S. publication in 2008. “If we mirror the technology being used in the United States, then we can be more efficient in this war.”³⁹

U.S. government officials should give serious consideration to formal collaboration with their Mexican counterparts. One model would have the two governments form a common border management regime. The governments’ proposed Binational Border Authority would have a joint budget and staff and address issues stretching beyond law enforcement and security to include trade and economic development, water and environmental issues, immigration, and labor integration. Ideally, such an authority could help develop technologies that can help prevent criminal activity before it occurs.⁴⁰

The key to improving border security

Better integrated planning by the Department of Homeland Security

A technological solution is necessary to augment the physical and personnel changes being made at the border. With Customs and Border Protection close to accomplishing its goal of building 661 miles of fencing,⁴¹ technology will likely become the primary focus. But defective equipment and previously lax governmental oversight of private contractors and poor strategic planning present formidable obstacles to meeting SBI program goals and deadlines.

Years back, during what should have been the planning stages for a comprehensive technological approach to border protection, DHS pushed without fine-tuning the goals and implementation strategies to take into account how and where and under what conditions the advanced computerized monitoring of the border could complement the work of the Border Patrol and local law enforcement. Separate solutions may be required for various issues, such as stopping illegal immigration, looking for terrorists, or drug interdiction.

An earlier attempt at a technology-based solution came in 1997, when the Immigration and Naturalization Service—the pre-DHS federal precursor to Customs and Border Protection—deployed the Integrated Surveillance Intelligence System, or ISIS. The \$239 million system of cameras, sensors, and databases was installed along several hundred miles of both the Canadian and Mexican borders. But the General Services Administration’s inspector general found in a December 2004 report that the U.S. government paid the contractor, International Microwave Corp., for work that was never done, and was overcharged potentially millions of dollars.

Investigators also discovered that many of the ISIS cameras, which were placed on 50- to 80-foot poles, broke down frequently. The situation led the government to stop almost all work on ISIS in late 2004.⁴² Many but not all of the system’s problems were repaired by L-3 Communications Holdings Inc., a New York firm that bought International Microwave in 2003.

Within a few months, the program was subsumed within a new DHS effort, the America’s Shield Initiative, or ASI. But the GAO said in a 2006 report that the new program had not been adequately established, and called for a complete re-evaluation of border surveil-

Six months after the SBInet program was unveiled, President George W. Bush vowed it would be “the most technologically advanced border security initiative in American history.”

lance technology. The GAO said that of the 30 positions that had been filled in the project’s program office as of August 2005, only three had defined roles and responsibilities.

The report also said DHS had failed to define some of the processes by which it would improve on ISIS, such as effective project planning as well as tracking and overseeing contracts. “As a result, the program risked repeating the inadequate contract management oversight that led to a number of problems in deploying, operating, and maintaining ISIS technology,” the report said.⁴³

All of this led the Bush administration to head back to the drawing board. In November 2005, DHS Secretary Michael Chertoff announced the Secure Border Initiative, which he hailed as a comprehensive approach to securing U.S. borders from terrorism while reducing illegal immigration. The goal, he said, would be to achieve operational control of the northern border with Canada and the southern border with Mexico within five years. “Our goal is to ultimately have the capacity to integrate multiple ‘state-of-the-art’ systems and sensor arrays into one interoperable and comprehensive detection system,” Chertoff said.⁴⁴

SBInet, the technological component of the Secure Border Initiative, includes a series of towers along the border, with surveillance and communications equipment—cameras, sensors, and radar—depending on the climate, terrain, and other factors. Information is transmitted to command centers that can dispatch Border Patrol officers. The technologies include computer hardware and software intended to provide a “common operating picture,” or a uniform look at activities occurring within certain areas of the border.

Six months after the program was unveiled, President George W. Bush vowed it would be “the most technologically advanced border security initiative in American history.”⁴⁵ As of July 2009, Homeland Security had issued 13 task orders for the project totaling about \$1.1 billion.⁴⁶ But DHS gave technology too prominent a role without proper planning and failed to look at the broader consequences of border security in a more deliberate way. The agency should have taken more time to do it right.

“My take is, [DHS] never had a strategic vision,” says Dave McIntyre, a former director of Texas A&M University’s Integrative Center for Homeland Security. While other government agencies also are lax about strategic planning, “it is bigger in Homeland Security because the organizations [within the new department] are not skilled enough or not used to thinking on a strategic level. They solve specific problems like ‘How do I make the trucks go faster through El Paso?’ They’re not used to thinking in a long-term integrated fashion about a strategy.”⁴⁷

The lack of clear requirements for the overall Secure Border Initiative portended difficulty, notes Andy Blumenthal, chief technology officer for the Bureau of Alcohol, Tobacco and Firearms and a former official at both the Coast Guard and Secret Service. He notes that SBI is broadly aimed at stopping illegal immigration as well as terrorism and drug

traffic. “Each of these purposes changes the equation,” Blumenthal wrote in an online blog post. “If the primary purpose of securing the border is to protect against a genuine threat of weapons of mass destruction, then some may argue for a highly secure border, one that is truly non-porous, without regard to cost. However, if the goals are more for controlling illegal immigration, perhaps a less perfect and less costly border security solution is acceptable. And if drugs are the issue, then maybe the money is better spent going after the source, rather than building fences that can be circumvented.”⁴⁸

This point was underscored by Sheriff Martinez in Val Verde County, Texas, who is focused on the increased drug trafficking and related criminal activity through the Del Rio sector. Martinez asserts that a manpower shortage—not lack of high-technology equipment or law enforcement intelligence—caused the failure of federal authorities to block an expected shipment of 70 tons of marijuana between the Texas border towns of Del Rio and Eagle Pass after Thanksgiving Day 2009. “It’s deflating,” says Martinez. “You throw your hands up in the air. What can you do?”

The result has been a border protection policy that relied too much on a technology component, SBInet, which is not yet fully operational and not as effective as it should be. “SBInet is trying to be all things to all people,” notes Rice University’s Bronk. “That creates a set of requirements that is just so staggering.”⁴⁹

This mindset is a symptom of the difficulties that DHS has had in establishing itself since it became a formal Cabinet agency in 2003. Because of the challenge of being formed in such relatively short time and having myriad demands placed on it, “the department was ill-equipped to handle” border security, Rep. Sanchez acknowledges.⁵⁰ The perceived political imperative to crack down on illegal immigration, which became an emotional hot-button issue during Bush’s second term, helped encourage the department to act hastily. “The border agencies have been under tremendous pressure and Congress wants action, so there has not been enough planning,” adds former Immigration and Naturalization Service Commissioner Meissner.⁵¹

What went wrong

The Homeland Security Department is accused of being reactive rather than proactive, which in some ways is a natural consequence of the formidable and pressing challenges it is tasked with addressing. It has been slow to articulate long-term strategies in a number of areas. But even when it sought to be proactive by developing SBI, the agency did not learn from earlier mistakes in planning regarding the deployment of technology. It did not think strategically enough about how border security fits in and potentially conflicts with its other missions, and as a result sought to implement a system that has been asked to fulfill a variety of differing missions.

What should be done

Draw on the expertise of academia and industry

With colleges and universities studying border security, there are greater opportunities to involve them in finding solutions and articulating the comprehensive approach that many say is missing. The private sector also is a rich source of expertise to build a long-term border security blueprint that is comprehensive yet flexible to changing conditions on the ground.

Texas A&M University professor Don Phillips, who coordinates his engineering department's homeland security research, says that if he had been in charge when DHS awarded the SBInet contract, "I would have said, 'Look, DHS and Boeing, this is not today's problem. This is everybody's problem for 100 years. We have got to craft an enduring, innovative research capability that will continuously address and improve border security.'" That capability, Phillips says, must examine short-term as well as long-term solutions and draw on experienced college faculty and students.

"The DHS and Boeing must find a way to engage the best minds in industry and academia to address important, ongoing border and immigration security needs," Phillips concludes.

"We need to find a way to get two or three universities directly involved with SBInet on a long-term basis; train faculty members to deal with this problem; and develop an interactive research program where these problems can be jointly addressed by the best brainpower in this country. It is also obvious that to create an enduring, knowledgeable body of scientists and engineers, joint academic coursework and training programs need to accompany scientific inquiry."⁵²

Draw on local communities and other agencies

As DHS takes a step back to properly develop a plan for this long-term project, it would strongly benefit from following several recommendations discussed throughout the report. These include reaching out to local communities, the states, a variety of businesses, both large and small, and other U.S. agencies in order to formulate a dynamic and strategic vision for the SBI program.

As a recent Western Washington University study on U.S.-Canadian border cooperation notes, alliances of local groups that have formed across border regions there "have proven to be vital 'laboratories' for trying out new programs and policies ... Problem-solving and innovation have been possible because of the well-developed networks of relationships that have sprung up across sectors and borders over many years."⁵³ This model in the Pacific Northwest should be studied by DHS for us (with necessary adjustments) on our southern border, too.

"The DHS and Boeing must find a way to engage the best minds in industry and academia to address important, ongoing border and immigration security needs."

Misguided spending decisions

Boeing and SBI net

Rushed by the political environment that demanded quick action on border security, and without enough strategic planning to find the most effective mix of advanced technology, agents, capital construction, and other equipment, DHS set itself up for more setbacks when it selected Boeing Co. in September 2006 as the contractor for SBI net. At the time of its selection, Boeing, a major defense contractor and commercial airplane manufacturer, had relatively little expertise on border security issues. It beat out three other large defense contractors—Lockheed Martin Corp., Northrop Grumman Corp., and Raytheon Corp.—as well as Ericsson Inc., the Swedish telecommunications giant.

Boeing sold its approach to SBI net as being less risky and more cost-effective than those of its competitors, which relied more heavily on unmanned aerial vehicles, aerostats (blimps), and wireless devices to link Border Patrol agents. Boeing’s plan centered on a network of 1,800 towers along the borders with Canada and Mexico, with each tower containing a variety of sensors, cameras, and heat and motion detectors. Partly because of its relative lack of experience on the border, the company was seen as a “dark horse” to get the contract, observed Brian Rich, president of Senstar Corp., a surveillance technology company in Ottawa, Canada, that has been in business for nearly 30 years and has installed advanced surveillance products in more than 80 countries. Senstar did not compete against Boeing for the contract.⁵⁴

Boeing received a three-year contract with three additional one-year options. The government sought to learn from its earlier contracting mistakes and declined to provide a specific dollar commitment to the company. Instead, each package of equipment and management solutions that the contractor offered were to be evaluated and bought individually. “We’re not just going to say, ‘Oh, this looks like some neat stuff, let’s buy it and then put it on the border,’” Chertoff promised.

But Boeing was given a high degree of latitude to define what needed to be done—a byproduct of earlier government failures to develop a long-term border security plan. Chertoff’s top deputy, Michael Jackson, acknowledged when meeting with prospective bidders at an industry briefing that “this is an unusual invitation. We’re asking you to come back and tell us how to do our business.”⁵⁵



Once Boeing got the contract, DHS took too much of a hands-off approach. Boeing subcontracted many portions of the design, development, implementation, and maintenance of the program, with Boeing handling the majority of the management aspects. Among the subcontractors are Centech Group, DRS Technologies, Kollsman, L-3 Communications Government Services Inc., Unisys Global Public Sector, and USIS.

A 2009 investigation by the agency's inspector general said that because of shortages of managers within the agency, Customs and Border Protection itself relied heavily on contractors to fill the skills gap and get the Boeing-led program moving. The inspector general found that contract workers constituted more than half of SBI's workforce.

The inspector general also found that the department did not clearly distinguish roles and responsibilities between Homeland Security and Boeing. "As a result, contractors are performing functions that should be performed by government workers," it said, citing the use of contractors to draft statements of work and acquisition plans.⁵⁶ DHS' Borkowski, who took over as project manager in September 2008, put it bluntly: "Basically I would have said, 'No, we are not going to leave the contractor in charge of this program. And if I don't have the resources and the people and the quantity of people, well, that's tough luck.'⁵⁷

What went wrong

SBI's first integrated mobile sensor tower tested successfully in Fort Walton Beach, Florida. The tower houses cameras, radar, wireless data access points, communications and computer equipment, and a tower security system. When combined with Border Patrol agent vehicle modifications, the mobile sensor towers will provide surveillance data to the Common Operating Picture, a critical component of U.S. Customs and Border Protection's comprehensive border security solution.

By their own admission, DHS officials say Boeing was given too much latitude to develop SBI's net from the outset. Contractors were put in numerous positions that government officials should have occupied—a consequence of the government lacking the experienced workers necessary to move the program along. There was little adequate oversight of Boeing, and many problems came to light only as a result of external investigations.

In a December 2009 interview, Borkowski blamed the problem on DHS' inability to properly assign Boeing a role at the outset. He noted that Boeing was expected to be a "lead system integrator," a management concept that became popular as the need for defense contractors grew rapidly after the 9/11 terrorist attacks. Lead systems integrators were intended, in theory, to give prime contractors more flexibility in assigning work on large-scale projects to subcontractors. But they proved disastrous in practice. The U.S. Coast Guard's Deepwater project, for example, ran into heavy criticism after primary contractors were tasked with making design and procurement decisions on behalf of the federal government—a move that was likened to foxes guarding the henhouse. Congress has passed legislation in recent years to restrict the practice.

Borkowski said SBI net became “a bastardized mix of strong prime contractor (Boeing) and lead system integrator.” He acknowledged this was “the worst of all possible worlds,” because “when I go into my contract and I say, ‘The camera isn’t working,’ and I’m talking to someone who’s on a different task order in the contract, they say, ‘Well, that’s not my problem, that’s the other task order.’ I’m saying, ‘Wait a minute, but it’s all Boeing.’” He acknowledged, “At some point, I ought to go rewrite this freaking contract ... And I would, if I had the time and the resources. But I have bigger fish to fry right now. So what I have to do is work around it until I can get to it.”

What should be done

Maintain tight control over the performance of contractors and agencies

DHS has already taken numerous steps in its oversight of Boeing, including instituting award and incentive fees and regularly checking on its work. DHS also established an executive steering committee of Customs and Border Protection’s senior leadership to assess these efforts. But clearly, all of these have not been enough. Other mechanisms should be put in place to call attention to problems internally—long before outside investigators from the GAO and DHS Inspector General need to get involved.

One solution is to ensure that government contracts are written to adequately factor in risks and unintended consequences, and to build in contingencies. That would eliminate or at least lessen the need for contracts to be rewritten after they are executed, as Borkowski noted:

“You can start off with a program that’s pretty screwed up with high risk, and manage it if you put tools in place to identify those risks, to manage the risk and to adapt as the consequences of the risks start to accrue. We can mitigate, we can minimize the impacts by watching, and getting ahead of them and anticipating them.”

Another potential solution is to create an independent internal watchdog organization that is funded by (but not directly overseen by) SBI officials. Such an organization could provide management as well as technical suggestions and help build public and political confidence by showing a willingness to submit to outside external scrutiny.

Other government agencies have turned to this concept on complex projects in the past. Case in point: When the Department of Energy was building the Waste Isolation Pilot Plant—a giant underground series of mined caverns in New Mexico to bury decades’ worth of materials used in building nuclear weapons—in the late 1970s, it agreed to fund a watchdog called the New Mexico Environmental Evaluation Group. Before the group was disbanded following the repository’s opening in 1999, its members, who included respected scientists and others with prior government experience, provided valuable input and guidance through meetings, reports, and testimony to elected officials.

Allow a wider variety of businesses to join in solving border security problems

Small technology firms might be examined to offer extra innovative input to larger groups such as Boeing, particularly if they are given a financial incentive. “There are smaller entrepreneurial companies that probably never would have had a chance to compete [for the SBI contract] and it may be they are so small that they’re invisible to the larger contractors,” observes Jay Fraser, the president of a San Antonio security company who writes about border issues for ThreatsWatch.org.⁵⁸

Consider New Jersey’s Sarnoff Corp., which has been working with the Marine Corps on a system called ACT-Vision that can automatically control hundreds of video cameras to ensure uninterrupted tracking of targets.⁵⁹ The company has not pitched its products to DHS for SBI-net, but its officials said the technology would be readily adaptable to and useful for border security, and would not be prohibitively expensive.

Even ideas from larger companies that bid against Boeing might be incorporated. Senstar president Brian Rich said his firm “never developed a relationship with Boeing” during the SBI-net bidding process, but that he saw room for enhancing the company’s sensor capabilities. Ericsson’s proposed SBI system, which relied on sensors and communications technology and was similar to a border network that the company built in Norway, “might have been a more interesting way of going,” Rice’s Bronk said.⁶⁰ Of course, such companies would have to be induced to partner with a competitor to whom they had lost a contract bid, but perhaps contracts could be written to encourage their participation even if they do not win the award.

Productivity and management breakdowns

The crying of Project 28

With a deadline of less than one year to deliver a working prototype of a technology-based border security system—as called for under the SBInet proposal—Boeing decided to use readily available technologies and connect the new network with existing surveillance equipment. In October 2006, it received a “task order” to develop 28 miles of the Tucson sector, a program known as Project 28.

The company missed its initial deadline to deliver the fully integrated system to the government. Among the problems GAO found was that it took too long for radar information to show up in command centers. Some of the radar equipment also was being tripped by rain, wind, and other factors, making the system unusable. As a result, Customs and Border Protection officials notified Boeing that they would not accept Project 28 until these technical problems were addressed.

The company responded by submitting three plans on how it planned to fix its mistakes between June and November 2007. CBP did not formally accept Project 28 until February 2008, after delays resulting from performance. Boeing was unable to integrate towers, cameras, and radars with the SBInet’s computer software.

Boeing officials defended their efforts by contending Project 28 was merely a simple demonstration project, not a fully operating final solution. “We put out a common operating picture that was really just off-the-shelf, just so we had some means to operate the system and to show that you could get information out to a moving vehicle out in the middle of the desert,” according to Jack Chenevey, Boeing’s SBI program manager, who spoke with a technology publication.⁶¹

But the company appeared to promise more than it could deliver. “When Boeing bid on this contract, it was to be the integrator of this whole thing [but] we later found out Boeing said, ‘Well, we’re not really an integrator,’” Sanchez recalls. “So if they weren’t really an integrator, why did they bid for a program that was about integration? That’s one of the most alarming things that has come up over the many, many hearings that I have held.”⁶²

Another alarming issue was the failure of the company and senior DHS officials to adequately consult with the Border Patrol about what that agency needed. The Border Patrol had “minimal input” into how the early network was designed, the GAO found. “The lack of user involvement resulted in a system that does not fully address or satisfy user needs,” it said in a February 2008 report.

In particular, Border Patrol officers had trouble using the laptop computers mounted in their vehicles to provide them with real-time information around the border. Investigators found the situation stemmed from Boeing’s desire to meet a schedule. The company said SBI program officials told them “there was not enough time built into the contract to obtain feedback from all of the intended users of the system during its design and development.”⁶³

The GAO and other watchdogs continued to unearth problems with the system. They included holes in communications such as delays in transmitting information, incomplete surveillance pictures, and dead pockets along the border that forced them to rely on cell phones and face-to-face talks. Motion sensors had trouble distinguishing among Border Patrol vehicles, people, and animals.⁶⁴ “The promise of technology has been oversold,” former INS commissioner Meissner said of SBInet in 2007. “And Congress is vulnerable to that overselling.”⁶⁵

The repeated lack of progress led lawmakers to take a more aggressive stance in their oversight. In September 2006, the House passed a bill (HR 6162) directing the DHS inspector general to review every SBInet contract exceeding \$20 million. It also required the department’s inspector general to report on cost overruns, significant delays, and other substandard business practices. But the Senate never took up the legislation.⁶⁶ So instead, lawmakers in both chambers held multiple hearings to air their frustrations.

But Congress did succeed in attaching legislative conditions to be satisfied before funds could be released. In 2007 and 2008, the GAO found that DHS had satisfied or partially satisfied most of those conditions. But one condition was not satisfied in either year and showed the agency’s continued difficulty in fully articulating a vision for SBI. According to GAO, in neither year did the department satisfactorily describe how its activities would further the SBI program’s goals as defined in a multi-year strategic program for border security.⁶⁷

This sparked the following complaint from Rep. Mark Souder (R-IN) in September 2009: “It is important to note that for the past three years, we have been asking for a timeline for SBInet deployment and life-cycle costs, but they have yet to be provided. Similarly, there is no picture of the performance metrics and parameters used to judge the success of this program.”⁶⁸

The House and Senate Appropriations committees, in their fiscal 2010 spending bill for DHS, provided \$800 million for border fencing, infrastructure, and technology. But the lawmakers withheld \$75 million until they received another spending plan that GAO

“The promise of technology has been oversold. And Congress is vulnerable to that overselling.”

reviewed.⁶⁹ “This is the sort of thing that I believe our committee needs to do to keep a closer watch on this project going forward,” explains Rep. David Price (D-NC), chairman of the House Homeland Security spending panel.⁷⁰ In February, the Obama administration’s budget request for SBI fencing, technology, and related costs dropped from \$800 million to \$574.17 million, for completion of the first phase of the SBInet project in Arizona and for further evaluation of the program.⁷¹

What went wrong

Project 28 essentially functioned as a giant experiment when political leaders wanted it to be a reality. While DHS and Boeing officials say the lessons learned from it have enabled them to make further progress on other parts of SBInet, it was too costly to serve that purpose alone.

Boeing and DHS also did not uncover and fix technical problems in advance of the GAO’s and other investigators’ research and created an impression that they were simply squandering money. Their efforts prompted Congress to take a much more adversarial stance.

What should be done

Improve interagency communications and planning and maintain flexibility in technology design

In its March 2010 report, the GAO makes four recommendations that should be followed in the short term:

- Revise the master plan for SBInet to include explicit ways to analyze, prioritize, and resolve defects
- Ensure that test schedules match up with the plan
- Allow enough time for reviewing and approving advance test work before actually starting the tests
- Make a priority list for resolving problems and let Customs and Border Protection know what is being done

Another solution also should be explored: Submitting plans for review to the National Academy of Sciences. RAND Corp. researcher Henry Willis notes that such an approach was beneficial in correcting problems with DHS’ Advanced Spectroscopic Portal Program, which monitors radiation emitted by trucks and other vehicles. NAS issued a 2009 report identifying several shortcomings in testing and recommended an expansion of computer modeling—an approach that Willis says might also work for SBInet.⁷²

“We need a true partnership with the private sector to capitalize on new innovations, rather than a dedicated system that, by the time it’s ready, is going to be obsolete.”

Over the longer term, however, DHS should think more broadly about how to address its approaches to border security. Given the ever-changing nature of homeland threats and challenges, many experts agree that large systems must have some degree of incorporating change. “Systems that are flexible, that are not locked into specific modes of operation, preserve the opportunity for border security organizations to adapt their performance to respond to changes made by individuals and organizations seeking to enter the country illegally,” explains RAND Corp. homeland security researcher Brian Jackson.⁷³

David Stephenson, an author and consultant specializing in homeland security and technology, agrees. He emphasizes that this is an area where government should concentrate its collaboration with industry. “We need a true partnership with the private sector to capitalize on new innovations, rather than a dedicated system that, by the time it’s ready, is going to be obsolete,” he said.⁷⁴

This could be done not just with SBI, but throughout government, by borrowing the techniques that have enabled the technology industry to far outpace government in terms of innovation. As Rice University’s Bronk says, “You have to let ideas win, not process.” To generate new and bold ideas, government needs to work differently. He says one way to bring the government bureaucracy into the 21st century would be to enable a single scientific agency, such as NASA, to reconfigure itself to adapt the ideas of Google and other innovative companies, then enable that approach to filter through the government. Bronk has urged that a permanent blue-ribbon commission of experts explore the concept.

Consider new types of technologies for broader border control

DHS used a narrow, “vertical” approach to deploying technology that involves perfecting individual areas of the border instead of gradually applying technology horizontally across a broader swath of the border, ensuring that one or two kinds of technology can work at a time before moving on.

The vertical approach has heightened expectations that everything will work perfectly, but it didn’t work out that way in Project 28. That’s why Bronk says SBI should “not try to integrate everything together.” Instead, he says the program should “get one or two things out the door that you know can work. You could get one type of sensor optimized and working well and then move on to the next one. You’re removing complexity from the equation.”⁷⁵

More recent challenges

Structural and operational reforms

When President Obama took office in early 2009, the ailing U.S. economy occupied most of his and Congress' attention, making border security less of a front-burner issue. On the campaign trail, Obama had joined his Republican challenger, Arizona Sen. John McCain, in backing the need for a physical fence and vigorous border enforcement. DHS officials agreed, arguing that it was essentially too late to abandon the Secure Border Initiative. Construction contracts had been awarded by late 2008 to complete nearly all sections of the fence, and most lawmakers endorsed some type of technological reinforcement as well.⁷⁶ Obama's selection of Arizona Gov. Janet Napolitano as DHS secretary was seen as reflective of his particular commitment to border and immigration issues.

Napolitano sought to take a different approach to immigration than her Republican predecessors, emphasizing during her early months in office the need to deport criminals and hold employers responsible for hiring illegal workers.⁷⁷ The DHS secretary led the Obama administration's efforts to repair the border protection initiatives. A new Southwest Border Initiative was established to step up the fight against the smuggling of guns, drugs, and illegal cash over both sides of the border. Agreements were revised and standardized with state and local law enforcement agencies to deal with apprehending criminal immigrants. And the number of audits of employers who were suspected of hiring undocumented immigrants was increased.⁷⁸

But on the SBInet front, things continued in much the same fashion as they had under the previous administration. DHS began construction in April 2009 of the first permanent SBInet operational system in Arizona, in a 23-mile stretch of border called Tucson 1. That project replaced the Project 28 system and involved putting up nine sensor towers and eight relay towers, followed by a formal operational test. A few months later, DHS and Boeing started a second deployment in Arizona in an area called Ajo 1 covering another 30 miles of border.

DHS also conducted user assessment tests in Playas, New Mexico. By the fall, the department decided to extend Boeing's contract for SBI for one more year, with the option to add one more year after that. Borkowski explained it was a pragmatic decision because if the project had been re-opened for other bidders, all work would have had to stop.⁷⁹

Borkowski had hoped that Tucson 1 could be formally ready by early 2010. But he acknowledged at the start of the year that system acceptance testing had not yet even started because he was working with the Border Patrol to fix technical glitches. “We took time to do those other activities and there’s a whole bunch of things that have to happen as a result,” he says. “For example, you’ve got to go out and after you’ve got the thing built, you’ve got to compare what you built to the design paperwork, and there’s something like 4,500 of those checks, most of which are done, but still a pretty good chunk of them to do. The original plan for the system acceptance test was, as we basically concluded, not adequate. So we’ve been going in revising that, tightening that up.”

But Borkowski continues to express hope that both Tucson 1 and Ajo 1 will be fully operational at some point in 2010. So, too, does Roger Krone, Boeing’s president of network and space systems. He told Congress in March that the Tucson area has yielded “real-world results in actual border operations” as a result. He expressed confidence that further improvements were likely in the months ahead.

Similar promises have been made before. “This was supposed to be all deployed by now, by 2008-2009,” the GAO’s Stana notes. “The entire Southwest border was to be covered by SBI ... [but] we’re still in the early stages.”⁸⁰

What went wrong

In its haste to meet a pre-existing schedule, the new Obama administration essentially let the status quo continue with SBInet. Napolitano ordered a comprehensive review of the program, but only after further technical problems surfaced and deadlines were missed. Congressional criticism intensified, and the Obama administration responded by proposing a dramatic cut in SBI’s budget for fiscal 2010.

What should be done

Improve the viability and performance of SBI, and only then seek additional funding

As DHS probes whether SBI, in its current form, is worth saving or scrapping, we suggest that the agency use CAP’s recommendations as a template for beginning to repair what is broken, including adding transparency and accountability of the project. These recommendations include:

- Sharing the findings of its internal review with Congress, academia, and the private sector and allowing time for substantive feedback.
- Inviting policymakers at the local, state, and federal levels to briefings and allowing them to regularly observe progress.

- Continuing the practice of enabling the Border Patrol to use parts of the system that are not yet fully complete as engineering work continues. Borkowski said the Border Patrol has provided useful feedback since this change in direction was made in February.

If, after careful review, DHS and Congress determine that a border security technology program is salvageable and should proceed, then Congress should create additional revenue streams.

Immigration legislation could be particularly helpful in this regard if it includes some sort of user fee, fine, or other levy imposed on immigrants, employers, or others that could be used to fund technology upgrades. If lawmakers are concerned about the economic effects of such levies on the poor, such funds could come out of existing fines rather than imposing a new fee system.

Lawmakers have tried to do this in the past. In 2006, for example, then-New York Democratic Sen. Hillary Rodham Clinton proposed ensuring that portions of two \$1,000 fines on undocumented persons seeking conditional status be returned to states to pay for health, education, and public safety services for immigrants.⁸¹ Instead, we could take this kind of approach but channel the funds back to the SBI program to ensure it has the means to continually upgrade its technology and its overall operations.

There are proposals to inspect outbound vehicles at U.S.-Mexico ports, such as this one in Del Rio, Texas which only collects tolls to cross into Mexico.



Even if only 10 percent of the bulk cash smuggled out of the United States is recovered, it could still bring in around \$5 billion—an amount that would go a long way toward paying for SBI.net.

Another potential new funding source could come from an enhanced government effort to monitor outbound money, guns, and drugs to Mexico as well as track inbound people to the United States. Progress on monitoring already is being made on several fronts in this area. The Department of Homeland Security is finalizing a proposal to collect fingerprints or eye scans from all foreign travelers at U.S. airports as they leave the country. At the same time, more inspections are being conducted on outbound vehicles at U.S.-Mexico ports of entry, and in 2009 all southbound rail shipments were screened for illegal weapons and cash. And with the surge in cross-border drug-related violence in recent years, the federal government has partnered with state and local agencies in setting up Border Enforcement Security Task Force, or BEST, teams to identify, disrupt, and dismantle criminal organizations posing threats to border security.

But DHS should consider going further by seeking innovative new ways to attract funding in what is obviously a tightly constrained budget environment. Sen. Jeff Bingaman (D-NM), who has long been interested in security issues as a lawmaker representing a border state, wants to move the government in new directions on security. Bingaman voted against the border fence, in part because he felt it was more important to spend money on local, state, and federal law enforcement. He has added money to recent spending bills to pay for additional agents and equipment, but also has started to lobby colleagues, interest groups, and the public to think in even broader terms by stepping up monitoring of outbound people and vehicles leaving the United States for Mexico in search of contraband cash that could be seized to fund SBI.

“The focus has been on increasing resources dedicated to inbound inspections with little attention paid to who or what is leaving the country,” Bingaman said in a 2009 speech to the Border Trade Alliance, in which he called for an entirely new border security framework. “Frankly, this is a very simplistic approach to the threats we face. The reality is that the border is a very dynamic area. At our nation’s ports of entry we routinely check for narcotics hidden on people and in vehicles, but we rarely check for guns and currency being smuggled out of the country.”⁸²

Indeed, even if only 10 percent of the bulk cash smuggled out of the United States is recovered, it could still bring in around \$5 billion—an amount that would go a long way toward paying for SBI.net.

The bottom line is that government needs to be sure it is doing what works as it takes on the problem of border security, fixes it, and moves forward. As it identifies increasingly creative solutions to control what Sen. Bingaman correctly describes as “a very dynamic area,” it should pay just as much attention to finding creative ways to pay for them.

Conclusion

Until President Obama's administration stepped in and began looking for what works in the border protection programs, the Department of Homeland Security's handling of border security through the Secure Border Initiative, or SBI, and its technological component, SBInet, had inspired little confidence. SBI's record is marked by numerous missed deadlines, unfilled promises, and hundreds of millions of taxpayer dollars spent with relatively little to show for it. The result has been unfairly turned into a political tool by lawmakers opposed to comprehensive immigration reform legislation. But if comprehensive immigration reform were enacted, updated immigration laws and better enforcement would lead to safer communities and increased national security.

Some of SBI's problems have arisen because of the frantically evolving nature of the Homeland Security Department since its creation—a process some experts have likened to building an airplane after it already has taken off from the ground. The proper systems, such as those to ensure steady oversight of contractors, have taken years to be put in place. By their own admission, DHS officials were guilty of false advertising in conveying the goals of Arizona's "experimental" Project 28 to Congress and the public.

As with other initiatives that were begun under President George W. Bush, it has fallen to the Obama administration to try to improve on the situation without completely scrapping what was in place. Obama's Homeland Security secretary, Janet Napolitano, is to be commended for ordering a department-wide assessment of the SBI program in early 2010. But it might have been wise to have such a review a year earlier to try to avert some of the problems that unfolded during 2009.

Now that the border fence is almost built, it is time to comprehensively assess its effectiveness, as the GAO has urged. Is it the best use of taxpayer dollars for security? It also is time to take a hard look at augmenting the technologies being used to complement the fence, to see if any innovative and reliable solutions can be implemented. All of this should be done without regard for political expediency and with an eye toward restoring trust in the Department of Homeland Security.

The importance of trust cannot be understated. Numerous studies have shown that when a governmental entity commits an untrustworthy offense, follow-up actions often do little to inspire public confidence. Senior DHS officials on the Secure Border Initiative appear to understand this; it is up to Congress and the public to see if their deeds can match their rhetoric in the months ahead.

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