



“Automate or Perish”

William von Raab and the United States Customs Service¹

The United States Customs Service polices the nation’s border. Established in 1789, Congress created the Customs Service to generate revenue for the Federal treasury – even before a Treasury Department existed -- by collecting duties on imported goods. Today 19,000 Customs employees inspect and clear tens of millions of people and \$1 trillion in imported goods entering the United States each year through 301 land, sea and air ports of entry. “Our job is not to carry goods across the border,” stated William von Raab, Customs Commissioner under President Ronald Reagan from 1981-89. “Our job is to make sure that the proper duty is paid, and the proper goods are admitted in proper quantities.”

In addition to collecting duties on imports, Customs officers enforce the rules and regulations of 50 other Federal agencies, each of whom have some statutory purview and responsibility over imports -- the Food and Drug Administration, the Fish and Wildlife Service, the Environmental Protection Agency, and Consumer Product Safety Council, for example. During the 1980s, Customs also acquired a principal role in the nation’s drug control effort, exercised largely at the border. In addition, Customs has long been responsible for providing data on the flow of the nation’s imports to the Commerce Department.

For over 200 years, the basic task of Customs, the structure of the import trade, and the business of ports remained essentially unchanged. Many procedures in use through the 20th century have been live relics of a complex body of law that von Raab once observed was only “a slightly updated version of what the British left us, designed for an era of sailing ships and physical handling.”

A freight carrier – say, a steamship -- carrying a load of textiles from China to Seattle was required to physically file a manifest with Customs that listed its cargo -- what was loaded on the ship, where the items were bound, where they came from, and what their value was. On shore, a Customs broker – someone licensed by Customs and hired by the importer to expedite cargos through the labyrinth of port clearance procedures – was required to physically file an “entry” that described the goods his client intended to import from the shipment. With the manifest and entry in hand, Customs decided whether to inspect the shipment or clear it for entry, and what duties and taxes were owed. All this happened after a ship docked, and could take hours, days or weeks, depending. “It is a system,” one trade official declared, “that only Charles Dickens could love.”

¹ This case was written in July, 2000 by Zachary Tumin. @ President and Fellows of Harvard College.

The Advent of Change. Thirty years ago, Customs was a “small and sleepy organization,” one Customs official observed, with a \$521 million budget, generating \$8 billion in duties, fees and taxes. Quietly, though, Customs was drowning.

Imports had increased 50% over a decade, and even by 1980 standards were tremendous. In that year the Service, with 12,800 staff at headquarters and in the field, handled 4 million brokers’ entries, covering 2.2 million cargo containers, and processed 30 million air passengers for U.S. entry. The workload generated oceans of paperwork erecting a classic nontariff, “paper barrier” to trade. Importers complained bitterly that port clearance delays were common and costly, with bills unpaid, and cash flows halted until deliveries of goods to distributors were actually made and taken. Domestic producers complained that even so, import inspections were rare, and commercial fraud common. Surveys found that Customs inspectors opened fewer than two of every 100 ocean-going containers that entered the country. To make matters worse, heroin, cocaine and marijuana were entering the country in large quantities through land, sea, and air ports.

Commercial trade likely to increase. In surveying their situation in the late 1970s and early 1980’s, Customs officials had good reason to be concerned. Forecasts predicted that imports could double in the next ten years, tracking the growth in global commerce as tariff and nontariff barriers fell. With the incoming Reagan Administration likely to press to reduce governments and deficits, Customs could hardly expect reinforcements.

Intense pressure to reduce staff. Indeed, every year for the next seven years the Reagan Administration sought to eliminate thousands of Customs positions. In 1983 alone Reagan proposed to eliminate 2,300 Customs positions, including 873 inspectors.

In 1984, the Administration proposed to eliminate 2,000 positions, including 820 inspectors. In 1985, 923 positions, including 452 inspectors. In 1986, 887 positions, including 206 inspectors. In 1987, 770 positions, including 321 inspectors -- even as mandated cuts under the Gramm-Rudman-Hollings antideficit law took hold and lowered the authorized number of Customs employees to 12,494 in 1987.

The Democratic-controlled Congress restored Customs budgets and inspections staff each year. With main street America in their view, Senators and Representatives on both sides of the aisle wanted to stem the flow of drugs into the United States, and to protect local manufacturing jobs. For eight years of the Reagan Administration, this was a source of friction and frustration between the Hill, the White House, and Customs. “Is the administration serious about stopping drugs?” a fed-up Senator Lloyd Bentsen, Chairman of the Senate Finance Committee, asked Customs officials. “On one side you get rhetoric and then you cut back.” Republicans and Democrats alike harrumphed their approval when Sen. John Danforth complained that the “yo-yo-like process” of cut-and-restore was “like watching the same bad movie every year.”

Hard balance to strike. Even if in the coming decade only imports increased and staffs shrunk, Customs would have a hard time holding its own— to keep trade moving, contraband out, data flowing, and import duties collected. In fact, though, Customs circumstances worsened immeasurably – as commercial trade fraud increased with the surge of imports, the pressure for inspections mounted from concerned domestic producers, Congress and trade negotiators demanded accurate data on imports, and the drug war took hold of Customs’ attention and resources.

Commercial fraud increased in volume and complexity. As trade increased, so did fraud, and with it the demand for more aggressive inspections from domestic producers.

Incorrect labeling of origin, false invoicing, undervaluing the contents of a package, or under-weighting a product such as steel were common ploys. East German steel, for example, might be stamped as a product of West Germany to receive lower tariffs. Sweaters woven in the People’s Republic of China were relabeled “Made in Japan” to bypass textile quotas. In one survey of shipments through a Gulf of Mexico coast, Customs found that 44 percent of the shoes that had been imported by an East Coast distributor were “misdescribed” – and routed for import to a gulf port where Customs was understaffed and the risk of inspection lower. “It is interesting, and quite frustrating to the domestic industry to review data showing textile imports from Asia being entered in ports hundreds, or even thousands, of miles from the nearest ocean,” a trade spokesman observed. Contraband such as counterfeit parts for aircraft, cars, and electronics amounted to and “epidemic” that cost American industry \$20 billion annually, according to one concerned legislator.

Pressure mounted to speed clearances. For their part, importers pressed Customs to maintain qualified staffs of specialists, auditors and inspectors to speed the movement of legitimate commercial cargo through the ports. Airfreight officials complained that air cargo spent 10% of its time in the air and 90% on the ground waiting for clearance. Ocean-going carriers complained that 30-35% of their costs reflected administration, largely redundant paper work. Inventory managers pressed for savings of days, not hours on the clearance of goods through ports. A trade spokesman stated that “Customs is failing to maintain their service aspect for international cargo. It has suffered tremendously, and we can directly attribute certain delays in movement of cargo to the lack of Customs staff.” The Big Three automakers, looking at foreign competition, were each eager to institute just-in-time inventories that required only an *hour’s* supply. “We have to schedule our assembly plants and docks hour by hour,” one Ford manager pointed out. “You can’t do that with paper.”

Overall inspections risk was too low – whether for drugs, contraband, or trade violations. Wherever one came out on Customs dilemma to balance trade facilitation with enforcement of quota and other trade laws, the odds of inspection were frankly low.

At Otay Mesa, Calexico and Tecate in California and Andrade in Arizona, for example, which were some of the busiest truck ports on the southern border, Customs inspected only 3% of laden trucks entering from Mexico. "Obviously we're in an area of international trade," explained Custom's port director for the San Diego district. "We're not in a situation where we can just stop traffic. 3% of trucks is a lot of trucks. That is already a lot of intrusion."

One government inspector who visited numerous Customs port operations characterized them as wanting:

Let me give you one simple statistic . . . You know these 20-by-40-foot shipping containers? Something like 70 percent of all the sea borne non-bulk cargo -- eliminate sugar, eliminate rice, you know, stuff that comes in by sea -- well, something over 70 percent of that comes in containers. You know how many of those containers Customs physically inspects? I mean, not just somebody kind of looks in, but somebody actually takes things out and inspects them? Point-five percent -- O-point-five percent. Less than 1 percent! Now, if you wanted to be a drug smuggler, for example, you would have a 99.5 percent probability of success for openers. And if you put a great big refrigerator or piece of heavy machinery in front of the drugs you smuggled into the country inside that container, I'd say your odds would be 99.99999.

Trade data was an embarrassment. Customs provided the Census Bureau with trade data each month. Federal policy makers and negotiators relied upon this data for driving the American position in international trade discussions, and calling nations on their violations.

During the early 1980s, delays and inaccuracies in the manual capture and hand off of this data from Customs to Census had deteriorated to the point where the "carry over" rate -- that portion of one month's reported imports that did not actually enter the country that month -- climbed to 35%, 45% even 50%. That meant that half of the imports recorded for June, for example, actually entered into the county in May, or April. At the height of one set of bilateral textile negotiations, one Customs official claimed that three major American ports were so backed up with entries that data was being sent to Census two to three months behind schedule.

Trade negotiators were livid. Congress, the GAO and trade groups breathed hot flames down Customs' and Census's collar to correct the deficiencies and get trade data captured, transmitted, and reported accurately and on time.

Illegal drug traffic increased and the drug war was launched. The Reagan Administration's war on drugs soon would put new and extraordinary strains on Customs'

resources. “We have told all customs officers that stopping the flood of drugs coming into this country is the first priority,” declared Customs Commissioner von Raab in 1982. But figuring out exactly how to balance the demand for law enforcement and for trade facilitation was difficult, a twist on the traditional *customs dilemma*: to facilitate trade, detect and deter violations of trade laws and import quotas, *and* stop drugs at the border. “How many people are you going to put on the border?” one Customs official asked. “Six feet divided into 1,800 miles -- you can’t do it. How many inspectors are you going to have left to inspect cargo?”

Enter von Raab

“Automate or perish.”

This warning from Customs Commission William von Raab quaked through the world of trade brokers, importers, carriers, freight forward and port authorities in 1985. “The real solution to the problem of trade facilitation,” he declared, “is to automate the entire process as much as possible.” Automation is “the ultimate answer to many of our problems with cargo clearance. With the manifest information available to us when a shipment leaves its foreign port of departure, we will be able to decide, while the shipment is on the high seas, whether to inspect or to pass it on without inspection, immediately after it hits the dock. The prospects for this system are staggering.”

Von Raab’s stern advice reflected the enormous emphasis that Customs placed in the 1980s on automation to manage its dilemmas – facilitate trade, detect and deter violations of import quotas and trade laws, and stop drugs at the border.

As a Reagan appointee and champion of smaller government, von Raab was determined that Customs would perform its mission with fewer staff, offloading Customs work to self-service by the trade, facilitated by automation. Customs performance, and its service to the trade, would hinge on electronic submission of manifest and entry data. “The more we get better information about shipments, the more we are prepared to let apparently legitimate shipments go,” Von Raab told a reporter. “If an importer comes in and he’s always clean, his entries will gravitate towards getting a general inspection; if he’s always off, he’s probably going to be inspected every time.”

The vision von Raab championed for Customs in the early 1980’s was of a paperless future. “Ultimately,” he said, “the system will permit Customs, through the use of preprogrammed criteria, to process and liquidate selected entries with absolutely no-hard copy documentation.” He planned to drive Customs towards a world of “paperless entry, a system of ongoing financial accounts” in which automation “eliminated the individual transaction processing of the past.”

To get there, von Raab would go to war against what he called “the five idols” of international trade: paper, human involvement, outmoded transportation routes, unnecessary government intervention in markets, and outdated legal systems.

Making It Happen

“The vision was clear from Day One,” recalled Lynne Gordon, a former Assistant Commissioner for Operations and director of the Miami port. “It’s not all that complex – have this totally paperless environment. There just happened to be a million steps involved in that process.”

And there was a history of Customs failure at automation that predated von Raab, set the stage for his appearance, and created the terrain for his vision. “Von Raab was the man who finally broke the logjam,” asserted Robert Ehinger, a long time Customs official and future head of its Automated Commercial System. “It was a coincidence of the political process that placed him, in this agency, at this time. The issues were already well defined, as was their management. But we had been defeated, and we were lost.”

Commercial Automation at Customs. “You must regard the emergence of automation in Customs as really the emergence of the commercial side of the house,” Ehinger said “– the half of Customs that was never well attended to,” the one that was a poor stepchild to the “gun-toting, swashbuckling” house of enforcement. “The notion that we did not manage the commercial side well was persistent in the conventional wisdom of government,” Ehinger said. “If you failed at being a cop, well, we’d put you over here on the commercial side—the gentlemanly side of the service, what the dullards would do for the undertaking.”

Ehinger had entered the Service in the early 1960s, and with a handful of young agents was soon recruited by Alfred DiAngelis, a career Customs official, to join a “best and brightest” cadre of “whiz kids” who would import a new way of thinking to the Service. Trained in management and systems at a program that DiAngelis arranged at Hofstra University on Long Island, they would eventually lead Customs through its automation travails – what Ehinger referred to as “an essential element in the emergence of man on the commercial side.”

“Most of the guys we worked with had come into the Customs Service after World War I, with horseback experience, brought in to do border patrol, especially during Prohibition. There were spittoons in the Customs service when I came on in 1961 in Detroit. I was the first new Customs officer hired there in 22 years. I was 21.

“I came into the Customs service in the beginning of my career as a young college student, having education no one else had, and trained by men who were capable of being my father and even my grandfather. It was the

most rewarding experience I could ever have. They fought over who would have me for the next assignment. They felt that it was so important to pass on their knowledge.

“Now their version of it was not what was needed for a modern Customs service. As we came in as a cadre of young, college-educated people and took over from this old core, we tended as a group to view the commercial operation as more significant, because it really has a lot to do with the economy of the nation. The traditional “that’s nice” about commercial operation began to vanish.”

With DiAngelis’s group maturing and gaining stature in the Service during the 60s and 70s, Customs began to take a hard look at its commercial operations. The targets were, by then, large. “Why do we have all these damned forms?” was a frequent oath hurled at the paperwork strangling Customs. As each new law and regulation came on, Customs added another form, or another procedure, no matter how contradictory one might be with another. “This was not a logical way to do business. No one,” Ehinger recalled, “ever did any analysis to look to see what the duplication or waste was.”

In the late 1960s DiAngelis’s group commissioned Booz Allen to study how Customs might address automating and modernizing the business of the commercial side. Since 1966, it had been building and operating a variety of entry systems with batch processing based on IBM 360s housed at its data Center in Silver Springs Maryland. But “there was no integration in the capabilities in these individual systems,” Ehinger recalled. “We just kept building individual systems.”

Customs had 11 different systems for revenue accounting alone, none of which could read or speak with the other, and required specialists in different programming languages to develop and operate each. “Not one of them goes together and matches,” Ehinger complained. “I can’t match the collections we’re bringing in against what we’re owed and write reports. Here was an agency of the Treasury Department that was supposed to be generating revenues, and it couldn’t even keep a set of books,” he said. “We were beset with little scandals, of people lifting the revenue here and there. Most of it was not malevolence, just malfeasance.”

“That’s what Al DiAngelis saw,” Ehinger continued. “When you come in to the Service you swear to protect the revenue of the United States. Al couldn’t sleep at night. Somehow, he thought, if we automated it would fix everything.”

In February, 1970 Booz advised Customs to develop “a single nationwide system” within the agency. With astonishing and prescient sameness, Booz volunteered the case for efficiency that found its way into every claim that Customs’ would make for automation resources over the next 30 years.

“In the past few years,” the report read, “significant pressures have been placed on the Customs Service due to a steadily increasing work load volume without commensurate personnel increase. Over the period 1965-69, the workload has increased 38.5% [from 1.83 million entries to 2.5 million annually], while personnel levels have increased only 3.6%.”

Not for the last time, the consultants promised gain without pain:

“The purpose of this study is to assist the Bureau of Customs in meeting its growing merchandize processing workload by proposing changes which will improve the efficiency and effectiveness of present methods while at the same time reducing the need for increased staff.”

The “single nationwide system” – the Automated Merchandise Processing System, or AMPS, as Booz proposed it – was to be an online entry and collection system. The vision included data entry of ship manifests by Customs at ports of entry; computerized selection of cargo to be inspected on a random basis; automated reconciliation of manifests with brokers entries, which would be input either by brokers or Customs clerks; classification of imported merchandise for the purpose of review by import specialists; calculation of duties and taxes, and automatic posting against broker’s accounts; and the automated capture and reporting of data to the Census Bureau.

“For the first time, in the Booz report, we recognized the notion that there was a wholeness to the operation,” Ehinger said. “All these individual approaches, limbs of the tree we’d built, didn’t have the same strength, and had fallen to the ground. AMPS was a way to pick up the pieces.”

Finally, in AMPS, Customs tried to pull its systems together, to integrate individual systems for selectivity, collections, and accounting, among others. “It is no exaggeration to say that the present system design for entry processing and master file is primarily a compilation of different approaches that have been made to improve Customs merchandise processing,” AMPS designers stated in a 1975 report.

“That,” Ehinger said, “was what AMPS was all about. And it totally failed.”

Stovepipes at risk. AMPS crossed too many empires.

“AMPS failed because of the notion, ‘Gee, automation means that we might take away the need for having all these empires.’ It offended everyone of the monolithic structures that existed in Customs. All the individual standalone smokestacks power forces in Customs were not interested in participating in a holistic approach. The bottom line was, it offended the gods, and the gods killed it. This was a baby that didn’t even float in the basket on the Nile, didn’t make it to the bulrushes.”

The lightning rod for AMPS development and its demise was a consultant, Allan J. Rappaport, whom DiAngelis had recruited to lead AMPS development. By Ehinger's account Rappaport was strong on analysis, and a progressive thinker. "But he was plainly incapable of attracting positive vibes from Customs. He was not invented here, he was not an ex-inspector, and so therefore he couldn't possibly know anything," Ehinger recalled.

The apocryphal moment for AMPS development came in the delivery of Customs plan for AMPS to Treasury Department executives -- "one of the most celebrated events in Customs," Ehinger observed. "It turns out to have been a total embarrassment."

"Rappaport had all the resources he needed for two years. He produced the report -- so huge, it filled 14 binders, the 3" jobs -- that they had to put them in a grocery cart and wheel them down the hall. We took it over to Treasury and presented it to the mother agency for the briefing.

"The briefing had been under production for months. We get to the part where we say we're going to pull it all together, automate, and it's all going to fit together, and you're going to take information from collection forms and rekey ... and we need 640 new input clerks.

"There was this look from the Assistant Secretary, and they all but stood up and said, "Why do you deliver a report that offends the budget process of the United States, when you've just heard that we're obliged to cut back?" Customs in its sweet little innocence... Here were people who had tried to do the right thing, and realized they weren't too damned bright. They'd missed a stitch. Talk about dumb, they'd missed the political climate altogether, and it was just stupid that anyone would put this in front of the Secretary like this. We virtually got our butts thrown out of the side door on 15th street.

Over the period 1976-77-78, Customs' automation efforts slumped, during what Ehinger called "a terrible period of depression and deflation":

"We virtually went from around 76-77-82 in this kind of tinkering funk over the collapse of AMPS, and our attempts to integrate. We did little itty things to have the selectivity system talk to the cargo system, attempts that didn't amount to anything or work well. We were around the edges but not really doing anything. And we wasted a number of years."

Failure, however, spawned seeds of success. Customs' system design required hundreds of new employees to keypunch brokers' documents, and Treasury had rejected it. "No one however," one account offered, "had thought to examine whether, and to what

degree customs house brokers – who file 95 percent of all the entry document handled by Customs officials – already used computers in their own work.”

Picking itself up off the ground, Customs cast around for a new design. Ehinger argued for brokers to take on the work burden of data entry.

“I said, ‘Look, it makes no sense for the importer to buy and sell the goods, and then have to offer the papers to the brokers, and then the brokers input to their system only to create a piece of paper to give to us for us to reinput. Something’s wrong here. ‘Think about it, guys,’ I said. ‘We ought to have find a way to interface the trade with this. Take the data they already put in , and transmit it electronically to us, hook their computers to ours.’”

Customs surveyed the trade and discovered that only of 175 of 900 brokers surveyed – 20% -- were automated. But the interesting news was that this 20% accounted for 60% of import entries. Put another way, more than half the data that Customs would have otherwise keypunched could easily be submitted electronically from brokers’ offices directly to Customs computers, without Customs ever touching it.

With DiAngelis in the lead, Customs cobbled together a pilot system, and in 1980 began tests of the Automated Broker Interface at the port of Philadelphia.

Enter William Von Raab and The Automated Commercial System

In 1981, newly-elected President Ronald Reagan named von Raab, then a New York attorney, as Commissioner of the United States Custom Service. Von Raab had previously served in the Federal Energy Administration, and as a consultant to the Commerce Department.

On arriving, von Raab named Alfred DiAngelis to Deputy Commissioner, the number two position in the Customs organization, without equal among peers, and second only to the Commissioner himself. “With DiAngelis’ knowledge and ideas, and von Raab’s power and drive, the stars came together for us,” observed Bob Ehinger.

As von Raab took the reigns at Customs, the drug war was looming. Imports were surging by 8.3 percent annually, rising from 2.8 million entries in 1970 to 8 million in 1987. Customs, von Raab knew, would soon feel enormous pressure to maintain service levels on the commercial side with fewer staff. He urgently needed to harvest the promised productivity savings from automating his shops, and having the trade key in their own manifest and entry data to Customs computers.

Within the year, von Raab had launched three fronts in his campaign to drive Customs towards automation on what would become Customs Automated Commercial

System (ACS). The Automated Broker Interface (ABI) was to be the first module deployed nationwide.

One front was internally at Customs, to drive ACS development and implementation, getting staffs on board, or out of the way. The second front was with the trade, who would have to make substantial investments in automation for von Raab's strategy to work. The third front was within the Federal government – at the White House, within OMB, and on Capitol Hill – for the financial and political support he would require.

Campaigning: Inside Customs

“What von Raab was to say was, ‘Let’s finally do it,’” recalled Jim Ryan, who led systems development under von Raab. Von Raab had four challenges internally.

The first was to design an integrated system that would link the trade to Customs nationally, and that would link all Customs systems from stand alone stove pipes to an integrated whole. The second was to fund it. The third was to build it. And the fourth was to clear opposition off the road.

The Management Team. Von Raab assembled his team, with von Raab himself at the helm.

A fiery, tough New Yorker of Dutch ancestry, at 44 a past vice president of New York University and then a partner in a Washington law firm, “Willie” von Raab was abrupt, imperious, and demanding. He bumped and rubbed people the right and wrong way all the time, “making ardent friends and fervent enemies” as he went, according to accounts, preferring unilateral action to consultations with bureaucrats. He championed Ronald Reagan’s philosophy of smaller government, declaring once that “I would only keep the Defense Department, the Treasury Department, in terms of protecting our national borders and collecting enough revenue to pay for the Army and the Customs Service.” He frequently tangled with top administration officials over what he saw as their hand wringing and dithering, especially in matters of Federal drug control policy, in which he played a major role. He once complained that drug czar William J. Bennett had been turned into a “Bloomingdale’s complaint clerk,” and made no mystery of his distaste for Reagan administration dealings with Mexico and Colombia. “There are too many people in the State Department,” he once said, “who regard every issue as a knot in a finely woven tapestry, every knot of which, if it were to come undone, the whole tapestry would come undone. If you take that approach to life, that every issue is related to every other, you’ll never do anything.”

Leadership issues. Von Raab made friends and enemies within the Customs Service as well. His vision, policies and strong personality drew respect as well as the wrath of entrenched interests and employee groups.

Von Raab's relations with the National Treasury Employees Union (NTEU) was especially volatile. Its head, Robert Tobias, boiled over time and again as Von Raab championed automation and defended, however meekly, Reagan administration proposals to reduce Customs inspections staff. Von Raab's "pet scheme to automate Customs has been a boon for drug smugglers and the loss of effective enforcement," Tobias declared. "It has taken experienced inspectors off the front lines and putting them behind computer terminals, leaving docks and airports virtually free of Customs' presence. That has brought joy to the hearts of drug dealers and an end to Customs as a major factor in the so-called war on drugs."

"Von Raab," one staff member recalled, "intimidated a lot of people because he was so bright. He was also very abrupt. But he never took any disciplinary action or negative action against anyone, and he knew ten times more about people's jobs than they did."

"The Commissioner was always concerned about making the right decision for the right reasons, no matter the consequences," recalled Lynne Gordon. Driving his agency towards his vision was costly but necessary. "Under the circumstances, he couldn't have been that well-liked in Customs, and he wasn't," she said, "But without him this would never have gotten going."

Jim Ryan, who enjoyed enormous latitude and success in systems development under von Raab, recalled von Raab as "a very get done kind of guy" who nonetheless was "not capable of nuance or diplomacy – it was not in his character to do that." Years later Ryan stated, "I wouldn't talk to him if he walked in the front door."

Robert Ehinger characterized von Raab as "the man who finally broke the logjam," but also wondered about the cost. "The problem was," Ehinger said, "we made a lot of mistakes. People who were killed off who shouldn't have been killed off; ideas stifled; but the result was the species was enhanced. Death is a part as in the evolution of the cell structure, and it is as much a part of life. We went through a cataclysm of events that killed off the dinosaurs during von Raab's tenure. History remains to judge whether that was profitable way to way to do it, or not."

The staff. At von Raab's right elbow sat Alfred DiAngelis, true-blooded Customs official, now Deputy Commissioner. He would move the initiatives forward through the established minefields, building support internally and externally for this vision of Customs integration, with the commercial side finally ascendant.

With DiAngelis' role came the deal making within Customs, with the trade, and on Capitol Hill, paving the way for acceptance, and in a hide-bound agency like Customs, making opposition costly. "He was more often concerned about who in the trade community would it help or hurt, and do favors for. The Deputy Commissioner was not a big investigative-side guy," complained one former top-ranking enforcement official. "But

he had the advantage, and in this agency, that mattered. He reminded people of that. Von Raab never really used his position to try to hurt people; the Deputy Commissioner did.”

At von Raab’s other elbow sat Gilmore S. “Bim” Wheeler, a consultant, son of a former Chairman of the Joint Chiefs of Staff. “You talk about a pampered, obnoxious brat -- he could only be equaled by von Raab himself,” Bob Ehinger recalled. “But the man is brilliant. Oxford education, mathematics. We saw time and again how clever this guy was and how Machiavellian he managed the world about him.” Ehinger chuckled at his recollection:

“This guy comes in and has the attitude, ‘I sit at the right hand of God.’ There was not anybody in the Customs Service who had any power beyond his because he *did* sit at von Raab’s elbow. And he did a tremendous job. Spotted the problems. Got the boss’s attention. Moved them, from a managerial perspective -- everyday we moved the mountains, the smokestacks, the pebbles that had collectively killed off AMPS, and we moved to get this damned thing fixed.”

To manage the financial side, von Raab brought in William Russell as comptroller and Assistant Commissioner for Management. For systems, Jim Ryan was “the guy who really was responsible for all the computer genius and creative procurement process,” in Lynne Gordon’s recall. Bob Ehinger would do the specifications work, creating a specifications shop, bringing together field people to manage the mission-related design aspects of the coming systems. Various assistant commissioners for operations, including Lynne Gordon, would also join in.

Campaigning: Getting The Trade On Board

Von Raab “made it clear that Customs expected the businesses the agency deals with to invest in automation as well,” one account reported. Brokers, who handled 95 percent of U.S. imports, were his primary target. His message to them, by one account, was “blunt and undiplomatic.”

“Von Raab put out a simple direct set of his goals to all audiences,” one former staff member recalled. “He was smart about how not to needlessly complicate things. We are going to automate, he said. And at the meeting with the trade community, he simply told them: we need you to input the data.”

The industry challenge, as Ryan recounted it, was huge, but well known

“We had this outstanding problem that we’re still processing paper, and we get it all on paper forms, at the time about 1,00,000 forms a year, big elaborate documents, everything that has to do with a Customs entry, the

average being 5-6 pages, some hundreds of pages long. So we had this problem and it was a known one. I remember seeing people key this in from computer output... It was ridiculous. It was common sense that the way to have them get the data to us was to key it in once, at the broker. But to change it ultimately involved changing the way the whole industry did business.

“‘Automate or die.’ That was it,” recalled Jim Ryan.

Progress with the trade. “At first a lot of brokers thought it was another government program that may or may not work, and may or may not continue to receive funding,” a trade industry spokesman told reporters.

Skepticism was high that there would be any industry benefits at all. “When we first started on this, it was all one-way. Everything was designed to eliminate manpower at Customs,” said a trade representative. One Customs official in fact acknowledged to reporters that “we would need three times the clerks we have right now if ABI stopped.”

“From the start,” one trade journal commented, “there was a question of what the benefit was to the broker who has been asked to spend wads of money to automate so that Customs can eliminate its data-entry staff.” For small firms especially, the cost of entry to ACS was high, as many had never been automated. One typical small broker spent \$30,000 in 1985 dollars for a multi-user system that included software for document preparation and ABI communications. “The poor little guy that hand writes entries will be whistling Dixie,” warned an industry spokesman.

Von Raab brushed aside corporate foot dragging. “These guys want us to employ additional customs officials to manage ineffective, inefficient past practices,” he told reporter. “That,” he added, “would amount to ‘corporate socialism.’”

For its part, Customs kept participation voluntary, and pledged to accept paper submissions. But to encourage early adoption of ABI, Customs gave preferential treatment to companies that submitted their documentation electronically. This included faster turnaround times on documents and speedier processing of goods. “We no longer are promising to treat everybody the same,” one Customs official told the trade in 1985. “If you invest in automation, you have the right to expect quicker service than somebody who didn’t.”

“Armed with the necessary information, Customs will be able to tell you, up to 48 hours before sea borne cargo arrives, which cargo we will want to examine,” von Raab asserted to port authority executives. “This gives shippers who use your port a tremendous advantage in planning the use of their resources.”

The inducements had the desired effect. “One day or two days is very meaningful in the international trade community,” one shipper said. Goods sitting on docks slowed payments to importers, who had to deliver goods before they could send a bill, and often paid large hefty interest charges for each day of delay.

Importers pressured their brokers to “get with the program.” “They are saying, ‘If you don’t use ABI, I’ll go to a broker who does,’” a transportation company executive told reporters in Oakland. “In the long run, there will be a shakeout in the industry.”

The trade soon caught on – either stay up with the Customs Service’s own automation initiatives, or lose business to competitors who would. Not only would early adopters gain competitive advantage, but those who were slow to automate might never recover. Increasingly, brokers found that they could not afford to delay automation because of the competition they faced from large importers and port authorities. During 1985-6, with the price of entry dropping, the cost of delay obvious, and the benefits clarifying, the trade’s migration to automation had begun in earnest.

In 1985, 20 percent of entries were filed electronically with Customs. By 1988, 57 percent of American brokers were online with ABI, and 40 percent of all entries were filed electronically. Customs reported that its cost-per-entry had fallen from \$28 in 1984 to \$3. Over the next five years, brokers spent more than \$600 million to automate and keep pace with the Customs Service. By 1990, *American Shipper* reported that 90 percent of all brokers’ entries were handled electronically.

Campaigning: Building Government Support

Within the government, von Raab began a seven-year campaign to build support and resources for automation, in part by acquiring a significant piece of the nation’s drug interdiction responsibility from which he could justify – and at times, cannibalize – automation budgets.

On his appointment in 1981 Von Raab saw a void in drug-law enforcement, and “moved in.” No one, it was said, played bureaucratic politics better than he. “The next thing we knew, Willie had an air force,” one rival told Newsweek. By 1989, it was reported that Custom’s “air force” had grown from two intercept aircraft in 1981 to 88 planes and helicopters. Its drug-related budget had increased 218 percent, faster than the Drug Enforcement Administration’s. “And what money they can’t cajole from Congress agencies may be able to seize from drug dealers,” it was observed. “Last year Customs took \$ 1 billion in cash, airplanes, boats and other booty -- twice its appropriated budget.”

During von Raab’s eight year tenure as head of Customs, imports increased by 50%, and revenues from duties and fees climbed to \$ 20 billion annually. Customs’ budget grew to

\$1 billion, due largely to von Raab's dogged pursuit of the drug war and his warm relations with Congressional supporters. Sen. Dennis DeConcini of Arizona, Rep. Charles B. Rangel, and Rep. Glenn English of Oklahoma chaired key committees, favored aggressive narcotics control, and helped fund it. And horse trading was common. Newsweek reported in 1989 that "Customs is building a spanking new center to coordinate its air effort along the international borders. Where did they put it? Land-locked Oklahoma City, in English's home district."

Budget and Procurement. With Congress and the Administration battling to stalemates over whether to allocate new sums for Customs commercial systems, von Raab turned to the proceeds of the drug war to help finance ACS development. The tremendous flow of drug war allocations and seizures soon helped fund the development of Customs' commercial systems. Ryan, for his part, had to build an operations center to house the system, and a network to run them— with little money formally allocated. There was one \$5 million allocation from or Congress for the whole \$150 million that would be spent on the new systems. Most of this sum would never be appropriated by Congress. Customs, under von Raab, would have to "spring it loose" by "re-orienting budget priorities," recalled Lynne Gordon.

To speed development, Customs used "innovative" procurement techniques that cut down on time frames and getting goods and services delivered. "Customs had virtually everything in the agency on requirements contracts so that at the end of the year, or any time when there was extra money, they could quickly spend. Lease-to-purchase was us," Gordon said.

Under Ryan's development reign, Customs made heavy use of contractors. "It was a Republican Administration and outside contractors were the thing," Ryan said. "So we farmed it out." Where Ryan's staff makeup was ordinarily 250 government programmers and 20-30 contractors, under von Raab the government staff stayed level, but contractors increased to 200-300. "The contract thing was really good. We could go hire good programmers," Ryan said. In choosing contractors, Customs recognized that small business and minority business owners received expedited treatment, and exploited this incentive. "Used it so much we got awards for it," Gordon recalled.

With von Raab and DiAngelis at the helm, Customs' skilled budget and procurement staffs launched a series of guerrilla funding and development strategies to bring the Automated Commercial System into being. Von Raab "taxed" every unit in the agency with a 2% budget reduction to fund computer projects. He used vacant personnel lines budget to squeeze salary money out to pay for more. "Von Raab made sure the number 1 priority was for ADP," she said. "He reordered the Customs budget without increasing it."

The benefit to ACS was tangible. "We are," reported Robert Ehinger in 1988, "upgrading ACS hardware and software almost on a daily basis."

ACS Unfolds

“What happened in the spring of 1983,” Ryan recalled, “was there was the right management, and the right set of resources. And so we started.”

The development path broke the rules for Customs, according to Ryan.

Rather than have three-year projects, where the work always gets done in the last four months, the rules keep changing, and debate is constant, von Raab put some parameters around this thing. We identified six modules – including collections, quota, selectivity --- and broke off a chunk of it. We will do it and do it quickly, we said, maybe six months to have the first two modules ready. Von Raab agreed and imposed this on the organization.

Design. Ehinger and Wheeler went off to begin design work. “The two of us with complete abandon,” Ehinger recalled, “with no strings on us. They took the shackles off us, we could get drunk together, sleep together, but we had to create this damned thing in six months.”

Making Timetables, Hitting Deliverables. As Customs incubated the early development of its Automated Commercial System, Ryan felt von Raab’s heat. “His approach to this was, ‘Here are the people who’re going to do it. Put an asterisk next to their name. If it’s not done on time, we’ll fire ‘em.’”

“These were crazy timeframes we gave people. Over the summer it was 86 straight days that we came to work. They were canceling people’s vacations that were paid for. Von Raab’s people were watching to see that we were working overtime and taking names on Sunday.

“What it tended to do was to bring people together. The group that I was associated with rallied in this cause to deal with this craziness. It was very effective. We couldn’t do it forever. But everyone got caught up in this and made it a success -- four months late, but we turned it on live in February 84.

“Von Raab? He’s still somewhat of a legend who could get things done. The real heroes? The GS 12’s, 13’s, contractors who actually built the system.”

The Automated Commercial System Unveiled

The Automated Commercial System comprised a series of software modules, initially running on Customs’ IBM 3084 mainframe, and later on two IBM 3090-400s located at

Customs' operations center in Franconia, Virginia. It became Customs' network for processing all commercial goods and cargo entering the United States, eventually to be used at all cargo ports of entry and by thousands of carriers, importers and brokers. Robert Ehinger became its acting head.

The ACS modules each automated an important segment of the importing process.

§ **Manifest:** With the ship, plane or train en route to a US port of entry, the carrier could provide Customs with an electronic manifest containing bills of lading describing the merchandise being carried to the United States for import

§ **Entry:** While awaiting the arrival of goods onboard ship, plane or train, the importer or broker could file an electronic *entry*, or invoice, indicating the goods it intended to import from the shipment.

§ **Cargo Release:** Customs computers would scan the manifest and entry for risky cargos, carriers or brokers, decide whether to release goods or inspect them, and enumerate the duties, taxes, and fees that applied

§ **Collection:** Based upon the goods that Customs releases, the importer would pay the duty, taxes, and fees via electronic funds transfer

§ **Entry Summary:** Customs computers would generate a statement that indicated the goods that were released and entered, and the sums paid, and send summary data to Census for trade summaries

§ **Liquidation:** a process that closed out the import transaction once inspections have been performed, goods released, and sums due, paid.

First Modules Go "Live." The first module to go "live" nationally in April 1984 was the *Automated Broker Interface* (ABI). ABI let brokers submit their entries to Customs electronically, with the work burden of data entry falling on brokers. They received back a clear statement as to duties and taxes to be paid, whether quotas permitted the goods to enter, and an indication regarding Customs' intentions to clear the shipment or inspect it. The benefits included reduced clearance delays -- real-time quota information, for example, reduced turn-around time for cargo processing from two or three days, to a few hours. For their part, Customs officials used the data from ABI to build profiles of carriers, brokers, and importers for use later in assessing the risk of subsequent import efforts by the same firms.

The *Automated Manifest System* (AMS) went "live" nationally in 1985 for sea borne carriers. It was both an import merchandise inventory control system, and a cargo release notification system. As ABI did for brokers and entries, AMS let sea borne cargo carriers, port authorities, and import service centers submit ship's manifest data electronically to

Customs before they entered port. Customs officials used the data from AMS and ABI to clear shipments through ports, or to hold them for inspection, and provided disposition information electronically to both carriers and brokers. Like ABI, AMS shortened the time Customs held onto goods prior to release, if at all.

Cargo Selectivity modules went live in 1986. By comparing cargo manifest data with pre-programmed risk criteria, the modules helped Customs officials isolate high-risk cargos for inspection. Selectivity, or risk criteria included such factors as the results of past examinations and identifiable risk factors having to do with country of origin, manufacturer, shipper and broker histories. Von Raab declared to reporters that “the computers will do all the hard, dull work, leaving our people free to analyze, free to decide whether the patterns they see are normal.”

Other modules soon followed, including Census Interface to update Census reports based on Customs release data (“ACS will help to make ‘carryover’ a word for the history books,” von Raab told reporters; In-Bond to facilitate transporting merchandize from one port to another in the United States; the *Quota System*, which checked incoming merchandise against running tallies of quotas; a *Financial System* which managed the billions of dollars in payments collected by Customs each year; and others.

Success. By 1989, stories such as this in *MIS Week* began to appear:

In the early hours of the Tokyo morning, Japan Air Lines flight 44 leaves Narita Airport carrying, among other things, today’s shipment of some of the thousands of different types of electronic components that Texas Instruments routinely transports from its plant in Malaysia via Tokyo to San Francisco, and then on to TI’s headquarters in Dallas.

After the wheels of flight 44 lift off the runway in Tokyo, a computer at the TI data center in Dallas initiates a transmission to the U.S. Customs data center in Washington, D.C.; the electronic message includes all of the information that Customs needs to know about each of the products in the shipment. Computers at Customs review the information applying predetermined selectivity criteria to determine whether this particular shipment requires manual inspection in San Francisco. This time -- as it does about 98 percent of the time -- the computer decides to release the shipment without inspection.

So, while flight 44 cruises at 37,000 feet above the Pacific five hours before it is scheduled to land in San Francisco, an electronic message officially releasing the shipment is transmitted from the Customs data center. By the time flight 44 arrives in San Francisco, a freight forwarder is already waiting to transfer TI’s cargo to the next available flight to Dallas. Within 10 days, the Customs computer will generate an electronic invoice for the duties and

fees incurred by TI, thus completing the importing process without creating any paperwork.

Headaches: Other Agencies

The promise of Customs' automation – speedier clearance of cargos – was contingent on more than Customs and the trade building electronic exchange. Half of all imports cleared by the United States Customs Service also required clearance by other one or more of 40 other Federal agencies. FDA itself had purview over 25 percent of all import transactions. When a second or third agency – less automated than Customs – had to clear the imports as well, delays grew intolerable. “It can add three or four days to the process,” one broker observed to reporters.

Customs was the first line of defense for agencies like FDA. “But we are only one part of who clears international cargo,” explained Lynne Gordon. “There are 40 others that have to inspect cargo also. At some point, Customs needed to get them on its system. If not, they'd slow the process down and there'd be no benefit to the trade community. That was a difficult thing to sort out.”

For example, when an importer filed a declaration with the Food and Drug Administration, the broker filled out a paper FDA form, stapled it to a copy of the invoice, and hired a messenger to deliver it.

Through the 1980s, Robert Ehinger, head of ACS, managed Customs' effort to bring other agencies on board. Brokers wanted all inspections agencies linked to ACS so that they could key in information once and only once, and take full advantage of the automation investments they'd already made, and to speed cargo through ports.

Ehinger ran up against formidable obstacles, many bureaucratic. “Each agency works in a different way and has a different enforcement mission,” one broker observed. “Certain products,” Lynne Gordon stated, “are the FDA's responsibility to check to ensure that they meet all the health and safety standards. Some, Customs does. But FDA is in each location, and wants to do its inspections, which happens to be about 25% of the cargo.”

“The concept Customs wanted was that everything would come into the computer, to Customs, and they would sort and send to other agencies who would respond electronically. Any message to and from federal agencies would come through on one system.

“FDA didn't want to have their information come through Customs' computer. They wanted their own system, with filers having two systems, one for them one for Customs. They didn't want Customs to filter their data.”

For their part, the non-Customs agencies believed they had good reason to be concerned. Customs had the reputation of sacrificing their interests at the ports first when they conflicted with Customs' priorities to collect revenues and clear cargos at low cost to Customs. "When safeguards required by other agencies, pursuant to their statutory responsibilities," complained one Congressman, "conflict with the highly questionable policy of the Customs Service to cut personnel while expediting the entry of goods into this country, those safeguards are removed."

Among the offending past practices, for example, the Environmental Protection Agency accused Customs of delaying the issuance of port directives that would have subjected imported chemicals to the same controls as US chemicals – meaning more work for Customs inspectors, and slower clearances. FDA furiously accused Customs of directing its field offices that a FDA "notice of sampling" – an announcement of FDA's intention to sample an import – was not sufficient reason not to clear cargo.

In their defense, Customs officials explained to Congress that Customs was "trying to impose efficiencies on other agencies so that they would not ask Customs to perform duties that they would not perform themselves." In 1989, one journal offered this account:

"The problem that Customs didn't predict was that even though the number of automatically cleared shipments has increased, so has the number of shipments held for inspection. This has been compounded by the eagerness with which other government and consumer agencies, such as the Food and Drug Administration and the Consumer Products Safety Commission, have used Customs' ACS for their own "interdiction" efforts.

"When an alarm is sounded in one of these agencies - say there is a fear of unsafe toys coming from certain factories in the Far East - flags are raised in the Customs database to expedite snagging those shipments at the point of entry. This results in what brokers call "blitzes" by the Customs Service. In fact, Customs recently enacted a blitz on toys, without anticipating the vast amount of merchandise involved during the pre-Christmas shipping frenzy. The ripple effect from these delays impacts all importers."

It was in this climate that Gordon led the delegations to FDA to try to bring them around to Customs' way of thinking – and to ACS -- but failed. Von Raab turned to OMB.

"Von Raab went to OMB and they mandated a single system. Unlike Customs, which self-generates revenues, other agencies have to ask for money for their own system. If OMB says they're never going to get any money for this, they're in trouble. Congressman Dingle got involved and put

pressure on the FDA. Von Raab explained how bad it would be, and how many systems there would be...

“Since it did save the government money, and did reduce paperwork, and was good government, OMB immediately got on the bandwagon. The decision had been made, but FDA didn’t like it. They were moving slow and putting up road blocks. Dingell held hearings, harassed them, demanded a schedule. Dingell was extremely unhappy with enforcement of FDA regulations on the import side.”

Customs and OMB gave priority to linking five agencies to ACS --the Food and Drug Administration, Fish and Wildlife Service, Department of Transportation, Federal Communications Commission and Food Safety Inspection Service. Even so, progress negotiating memoranda of understanding with agencies was slow. “Excruciating,” one broker complained to *American Shipper*. By 1990 Customs had recruited only one agency – the Fish and Wildlife Service – onto the ACS platform. Not until August of 1991, did Customs and FDA sign their own memorandum of understanding to establish an automated interface with ACS.

Status Check: 1990

“We’re still creating business for the filing cabinet industry, and I won’t be satisfied until we put a real dent in their drawers, so to speak,” von Raab said “We’re going to keep getting rid of archaic paper forms, and it isn’t just to save trees. We’re going to improve our efficiency so we can keep the growing volume of trade moving fast enough to fulfill our mission and meet your business needs.”

By 1989, Customs was processing 3.2 million containers, up from 2.2 million in 1980, and 45 million air passengers, up from 30 million. Its workforce had grown from 12,800 to 16,700 over this same period, but most new employees had been allocated to the drug war: the number of employees that processed cargo and passengers remained about the same.

By 1990, ACS was handling 90 percent of the information that traders filed with Customs. “Without ACS,” the Customs Commissioner asserted to reporters, “6,500 more employees would be necessary.”

“‘Automate or perish,’ he said,’ recalled Jerrol Larrieu, director of management information systems for the Port of New Orleans. “And Customs acted on that policy. It pretty much forced automation on the brokers, by expediting work for automated

customers, while slowing it down for those who were still turning in paper documents. That policy worked. I'd say 98 percent of the brokers are using the system now."

But Customs' "get-tough" policy left some bitterness in its wake. In fact many officials at freight brokers are unwilling even to speak about the "von Raab period." "I don't even want to talk about ABI," says one customs house broker. "It's still a very controversial system."

"We weren't given a choice," complains another local company official. "Customs had spent billions of our tax dollars on this system, and was determined that we go with it. So we did."

But even as Customs and the trade completed automation and development of the ACS platform, Customs suffered mounting criticism of its operations.

Importers Complain of Delays; Domestic Producers of Too Few Inspections. Even with ACS, industry officials warned, Customs' efficiency clearing cargo remained "dismal." "You can get a shipment by plane from the Orient in a matter of hours - and have it sit for 12 days, in some cases," a J.C. Penney executive told reporters.

Others clarified. "If Customs doesn't want to look at a shipment," one industry spokesman complained, "it's released pretty quickly. What we want improved is the turnaround on inspected cargo. It shouldn't take more than two to four hours, but now it takes an average of about three days. That's just too long. Customs must improve its methodology in this area."

Brokers also complained that the drug war had diverted important Customs staff. "The emphasis on Customs enforcement, particularly in the drug area, has bled away some of the best classification people," said one New York-based broker whose firm expedited 10,000 shipments annually. Classification of goods was essential to determine where they fit in to the labyrinth of Customs categories, which could be quite antiquated. "We don't quarrel with interdicting drugs or trying to stop the shipment of weapons to Iran," said one trade representative from Los Angeles, "but we would like to see the same kind of effort put into the commercial side."

M. Sigmund Shapiro of the National Customs Brokers and Forwarders Association of America Inc., told the House Ways and Means trade subcommittee:

"We, as an industry whose clients include the majority of the importing and exporting trading community, are extremely concerned the Customs Service has lost sight of its mission. This year, the pendulum is out of control. On the one hand, the narcotics problem in the U.S. has reached crisis proportions, and on the other, international trade is burgeoning. At the same time, Customs presents to Congress proposed budget figures, in line with the

administration's mandate, that compel a reduction in personnel. Each time the Congress, properly concerned with the drug problem, gives the agency additional funds for this purpose which are immediately utilized for narcotics interdiction. This leaves little additional resources for Customs' main function as the administrator of the U.S. tariff laws, a deputy for the policing of other international laws and regulations to protect the public and, most importantly, a revenue collection agency."

Meanwhile, domestic producers and drug control advocates pressed for tougher and more frequent inspections. Towards the late 1980s, Congress took frequent testimony that Customs staffs were running on fumes, as this GAO investigator explained to a House committee:

"There's a huge facility called the Miami Free Zone near the Miami airport. The whole thing has two or three Customs people in this little office where the phone is ringing constantly. The day we visited them, they were almost in tears. The vaunted computer system was down most of the time, and when it wasn't, it was almost worthless because the categories of cargo that it identifies for inspection are obvious anyway and too broad: 'Goods from Taiwan.' They have not the slightest idea what goes in and out of that place, nor do they have the ability to do any kind of auditing of that place. It's wide open."

Congress doubted Customs explanation that automation would solve all problem, as Rep. John Dingell observed:

"The pressures generated by a volume of imports that has more than doubled while Customs' manpower has remained static have led to serious problems that call into question the ability of the agency to perform its essential functions. Moreover, a series of new programs designed to resolve the resource problems have yet to demonstrate that they can succeed. Yet, the prevailing attitude in elements within the administration apparently has been to cut first and ask questions later."

Von Raab, coming to the end of the Reagan Administration and his own tenure, responded that in fact Customs' performance had improved over the decade. He cited a dramatic tripling in the quantity and value of seizures of contraband textiles, electronics, and steel entering the country that resulted from quick targeting based on automation. He pooh-poohed charges that Customs' commercial operations were being shortchanged. Complaints, he said, were an indication of Customs' increasing effectiveness. In fact, Customs' investments in ACS offered up life-saving economies to the trade; von Raab cited as evidence the growing proportion of imports that was being cleared without requiring any inspection beyond simple document checks – by 1988, about 80 percent in large ports like

New York. "What we have got is an imperfect system which is being made better by the addition of computerized data," he told reporters.

Customs Automation Competence Questioned. With ACS a major undertaking at Customs, it fell under increasing scrutiny from government and industry watchdogs. The General Accounting Office and the trade both noticed that ACS had quietly fallen behind on its implementation schedule, and raised the first questions as to Customs' competence to develop such a system.

"We are concerned," said a spokesman for the air freight industry, "because this slippage represents not only a lack of automation resources in Customs, but reflects some basic questions on the soundness of ACS design and functionality."

GAO noted, in addition, that Customs had rolled out ACS so fast that it had failed to plan for or publish the documentation required to update and modify it. Industry officials complained to Congress that because the system was developed rapidly, it required constant reprogramming and manual systems to back it up. "ACS has changed almost daily, without testing and certainly without informing the users," staff reported.

Customs Presses On. Customs, meanwhile, was charting a course for the 1990s. In 1989, McKinsey & Company released a report commissioned by von Raab to define the Customs Service's role in the future of global commerce. Called "Developing a Strategic Vision for U.S. Customs Commercial Operations," it urged von Raab to eliminate the paper backup of manifest and entry forms, as required by law, and to migrate to ANSI X12, the electronic data interchange (EDI) syntax that many American corporations had adopted.

As a result of the report, Von Raab committed Customs to migrating to EDIFACT, the international syntax that was much less familiar to American producers, and to modifying ACS accordingly. EDIFACT offered tremendous global advantages over the American standard, von Raab explained, and represented an "opportunity for the world's customs organizations to interact with the trading community and with each other in a more efficient and less disruptive fashion through computer-to-computer communication."

As for his own organization, "the Customs Service wants to deal with business as business deals with itself; we are committing ourselves to an electronic future," he said. "Customs is again taking a leadership role in the development and adoption of electronic interchange. ACS is the international trade system of tomorrow, today."

"It's like a breath of fresh air," one American importer observed to reporters. "I've been involved with importing for a long time, and the relationship between Customs and the importers has always been somewhat adversarial. But now, Customs is saying, 'Let's take a

look at how we're conducting business; let's see how we can do it better.' 'I'm very enthusiastic about the changes that are taking place.'"

Customs officials like Robert Ehinger noticed other implications of McKinsey's recommendations:

"What they're saying is there's no reason we can't standardize the commercial information now used by business, and that the government can totally abandon its own need for specialized data. There's no reason that government has to have trade data that is different than the commercial data that industry generates in the course of business and that we all end up using anyway."

Von Raab convened development teams to work out the requirements for ACS. "Our goal was to input data only once, thereby increasing accuracy and integrity in the management of information," said the Customs official in charge.

The New Decade Begins

Von Raab Departs. Early on in 1989, newly elected President George H. Bush let it be known that he had decided not to reappoint William von Raab as Customs Commissioner. Having "transformed the agency from a routine checker of cargo and luggage into an aggressive warrior against drug smugglers and exporters of military contraband," as one account offered, von Raab soon returned to private life in Washington.

Modernization Act Secures the Automated Future. In 1991, Rep. Philip Crane (R-Ill.) introduced the Customs Modernization Act (H.R. 2589), the first overhaul of the Tariff Act since 1978. The "Mod Act," as it became known, gave the Customs Service the authority to use electronic processing for all its transactions, eliminating requirements for paper documentation of manifests and entries.

NAFTA Signed. In 1992, the United States, Canada, and Mexico signed the North American Free Trade agreement. NAFTA opened the borders for trade, established the largest free trade zone in the world. In signing NAFTA, the three nations agreed to "exchange statistics on international trade, harmonize documentation used in trade, standardize data elements, and accept an international syntax for the exchange of information." Work soon began to standardize these trade processes, and test them in the design and operation of the North American Trade Automation Prototype.

Uncertainties. With ACS accepted and in continuous development, important questions remained for Customs. As trade barriers fell, could Customs' automation keep pace with even faster growth in imports and increasingly complex demands of global trade? Could Customs' strategy, systems and performance make good on the promise of both speed and quality – hastening the pace of goods through ports by reducing the number of

shipments that required inspections, while also detecting and deterring illegal shipments that violated import quotas and other trade laws? Could Customs integrate other Federal agencies' requirements into its border control mission without slowing trade? Could it develop the systems it required – satisfying skeptics, earning government and trade support for new investments, and paving the way for paperless, seamless trade in the global economy?