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PUBLIC SERVICE FOR THE 21ST CENTURY: INNOVATIVE SOLUTIONS TO THE FEDERAL GOVERNMENT'S TECHNOLOGY WORKFORCE CRISIS

HEARING

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY AND
PROCUREMENT POLICY

OF THE

COMMITTEE ON
GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

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PUBLIC SERVICE FOR THE 21ST CENTURY: INNOVATIVE SOLUTIONS TO THE FEDERAL GOVERNMENT'S TECHNOLOGY WORKFORCE CRISIS

TUESDAY, JULY 31, 2001

House of Representatives,
Subcommittee on Technology and Procurement Policy,
Committee on Government Reform,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. Thomas M. Davis (chairman of the subcommittee) presiding.

Present: Representatives Davis, Horn, and Turner.

Staff present: Melissa Wojciak, staff director; Amy Heerink, chief counsel; George Rogers, counsel; Victoria Proctor, professional staff member; James DeChene, clerk; Mark Stephenson, minority professional staff member; and Jean Gosa, minority assistant clerk.

Mr. Tom Davis of Virginia. Good morning. I would like to welcome everyone to today's oversight hearing on the information technology human capital management crisis facing the Federal Government. As many of you know, the GAO added human capital management for the Federal Government to its annual high risk list in January of this year. Governmentwide, we face significant human capital shortages that will only get worse as 35 percent of the Federal work force becomes eligible to retire in the next 5 years. The numbers are even more startling in highly specialized fields, where the government is recruiting in direct competition with the private sector. Nowhere is this more evident than with the technology work force. It is estimated that 50 percent of the government's technology work force will be eligible to retire by the year 2006.

Today's hearing will examine the problems the Federal Government faces in recruiting and retaining technology workers, as well as the challenges facing the government in competing against the private sector for this highly skilled highly sought after work force.

Over the past decade, the Congress and the government have worked together to bring about significant management reforms. We have passed financial management reforms, information technology management reform, acquisition reform and government performance and results legislation. But unfortunately, no one has updated the laws and regulations governing the management of the government's single most valuable resource, its people. The private sector long ago made an end-to-end review of human resources management and learned a lesson our government has yet to recognize. A company's value is only as strong as the people that come through the door, and those people who come through the door every day bring knowledge, new ideas and innovation.

A recent KPMG report on human capital management within the Federal sector noted that government is operating with personnel tools utilized and developed in the 1950's and 1960's. The same study noted that industry undertook major human management reform in the 1980's, followed by ongoing updates that occur as often as three times a year.

For the past decade, the government managed through minimum mandatory personnel ceilings and hiring freezes. Today we see the results in nearly every GAO report on a wide range of government programs. For instance, the Department of Defense lost so many of its civilian personnel, the Pentagon faces growing challenges in managing weapons acquisitions and logistics. This is coupled by the fact that 50 percent of the remaining DOD acquisition work force is eligible to retire by the year 2002.

A July 2001 Department of Energy Inspector General report found that recruitment and retention of highly skilled technical personnel has fallen so far behind that the Department was failing to meet mission goals. Specifically, the work force at DOE has been downsized by 24 percent over a 3-year period without any strategic planning by agency leadership. This led to a 2-year shutdown at Livermore's plutonium facility, as there were not enough Federal personnel in place to oversee daily operations.

At NASA downsizing has left the space shuttle launch team short of qualified personnel to oversee shuttle safety and launch activities.

Unfortunately, I could share with you many additional examples within Federal agencies. Today we must address this reality, both in the long- and short-term. First and foremost, we must move beyond black and white arguments for and against outsourcing as a part of a comprehensive human capital strategic planning initiative.

I am encouraged that the Office of Management and Budget this year requested work force analysis reports from all executive agencies that include identifying future personnel needs, succession planning, and recruitment and retention strategies. I would like to request that the GAO review these reports that were due into OMB on June 29 to see if agencies are actually tackling this challenge.

In addition, I am heartened that human capital is expected to be a part of every agency's performance plan. In the coming months I plan to work closely with the GAO, Federal employee groups, the private sector, and the administration to identify additional steps that must be taken to allow the government to address the human capital crisis.

While it is my firm belief that the larger human capital management crisis will not be solved without the efforts of the Congress, the administration, Federal employees, and the private sector, we have to look to more immediate solutions to solve the work force shortages faced in highly skilled technical areas to ensure that government agencies are able to effectively and efficiently perform their missions while enhancing service delivery to the taxpayers.

Today, e-government is a top priority for the Federal Government. The promise of e-government is revolutionary, but we face severe implementation challenges. As we heard at a hearing on acquisition reform before this subcommittee in May, too many of our complex IT procurements continue to fail, upwards of 40 percent. In addition, we have over 1,300 different e-government initiatives under way. But we have no measurement of which projects are worthwhile or which should be expanded across agency or across government to truly make service more accessible.

I am pleased the administration has just named an Associate Director of Information Technology within OMB and a new eGov council to review and assess IT spending. However, I believe we need individuals who can work daily on reviewing the status of IT modernizations or cross-agency initiatives to assist in the success of this new team. Unfortunately, the government can't attract mid-level IT managers who can perform these functions.

That is why I have introduced legislation today to create a Digital TechCorps. I believe we can help government transform itself by creating a new vision of public service for the industry. According to the National Academy of Public Administration study on the Federal IT work force, the primary barriers to recruiting new IT workers are salary and length of time between job announcement and the actual hiring of an individual. Moreover, of the five categories identified by IT professionals when considering job opportunities, the Federal Government received a low score in all but one category. The creation of a tech corps would help eliminate those hurdles.

First, my proposal sets up an exchange program that can begin as soon as an agency negotiates an exchange agreement with a private sector entity. Next the private sector individual will come into government at the GS–12 to 15 levels for a period of up to 2 years. But they will continue to receive pay and benefits from their private sector employer. In addition, the Federal Government's mid-level IT managers will have the opportunity to go to work in the private sector for up to 2 years, while retaining their government pay and benefits.

This type of public-private exchange program will allow for greater knowledge and understanding between the public and private sectors. I believe it will foster greater innovation and partnership for government. I think it is a win-win scenario.

The Federal Government sits on the brink of tremendous opportunity. We must utilize every opportunity available to us to achieve real transformation. This includes a comprehensive review of our human capital management. For too long the Federal Government has been considered the employer of last resort, this despite the tireless efforts of Federal employees who continue to be treated as costs to be cut rather than the greatest asset of every agency and bureau within the government.

I look forward to discussing what creative solutions can be brought to bear against the looming crisis facing our government today. The subcommittee will hear testimony from David Walker, Comptroller General of the General Accounting Office, Kay Coles

James, the new Director of the Office of Personnel Management, and Stephen Perry, the Administrator of the General Services Administration.

On our second panel we will hear from Dr. Steve Kelman of the John F. Kennedy School of Government, Harvard University; Mr. Martin Faga, the CEO of Mitre Corp., representing the National Academy of Public Administration; and Dr. Ernst Volgenau, CEO of SRA International, representing the Information Technology Association of America; Mr. Steve Rohleder, the Managing Partner of Accenture.

I now yield to Congressman Turner for his opening statement.

[The prepared statement of Hon. Thomas M. Davis of Virginia follows:]

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Opening Statement of Chairman Tom Davis
Hearing on "Public Service for the Twenty-First Century: Innovative Solutions to the Federal Government's Technology Workforce Crisis."
Subcommittee on Technology and Procurement Policy
July 31st, 2001 at 10:00 am
2154 Rayburn House Office Building

Good morning, I would like to welcome everyone to today's oversight hearing on the information technology human capital management crisis facing the federal government. As many of you know, the General Accounting Office added human capital management for the federal government to its annual high risk list in January of this year. Governmentwide, we face significant human capital shortages that will only get worse as thirty-five percent of the federal workforce becomes eligible to retire in the next five years. The numbers are even more startling in highly specialized fields where government is recruiting in direct competition with the private sector. Nowhere is this more evident than with the technology workforce. It is estimated that fifty percent of the government's technology workforce will be eligible to retire by 2006. Today's hearing will examine the problems the federal government faces in recruiting and retaining technology workers and the challenges facing government in competing against the private sector for this highly-skilled, highly-sought-after workforce.

Over the past decade, the Congress and government have worked together to bring about significant management reform. We have passed financial management reform, information technology management reform, acquisition reform, and government performance and results legislation. Unfortunately, no one has updated the laws and regulations governing the management of the government's single most valuable resource: our people. The private sector long ago made an end-to-end review of human resources management and learned the lesson our government has yet to recognize: a company's value is only as strong as the people that come through the door every day bringing knowledge, new ideas, and innovation.

A recent KPMG report on human capital management within the federal sector noted that government is operating with personnel tools utilized and developed in the 1950's and 60's. The same study noted that industry undertook major human management reforms in the 1980's followed by ongoing updates that occur as often as three times a year.

For the past decade, the government managed through minimum mandatory personnel ceilings and hiring freezes. Today, we see the results in nearly every General Accounting Office (GAO) report on a wide range of government programs. For instance, the Department of Defense (DoD) lost so many of its civilian personnel, the Pentagon faces growing challenges in managing weapons acquisitions and logistics. This is coupled by the fact that fifty percent of the remaining DoD acquisition workforce is eligible to retire by the year 2005. A July 2001 Department of Energy (DOE) Inspector General report found that the recruitment and retention of highly skilled, technical personnel had fallen so far behind that the Department was failing to meet mission goals. Specifically, the workforce at DOE had been downsized by twenty-four percent over a three year period without any strategic planning by agency leadership. This led to a two year shutdown at Livermore's plutonium facility, as there were not enough federal personnel in place to oversee daily operations. At NASA, downsizing has left the space shuttle launch team short of qualified personnel to oversee shuttle safety and launch activities. Unfortunately, I could share with you many additional examples within every federal agency.

Today, we must address this reality both in the long and short term. First and foremost, we must now move beyond black and white arguments for or against outsourcing as a part of comprehensive human capital strategic planning initiatives. I am encouraged that the Office of Management and Budget (OMB) this year requested workforce analysis reports from all executive agencies that include identifying future personnel needs, succession planning, and recruitment and retention strategies. I would like to request that the GAO review these reports that were due into OMB on June 29 to see if agencies are actually tackling this challenge. In addition, I am heartened that human capital is expected to be a part of every agency's performance plan. In the coming months, I plan to work closely with the GAO, federal employees groups, the private sector, and the Administration to identify additional steps that must be taken to allow government to address the human capital crisis.

While it is my firm belief that the larger human capital management crisis will not be solved without the efforts of the Congress, the Administration, federal employees, and the private sector, we must look to more immediate solutions to solve the workforce shortages faced in highly-skilled, technical areas to ensure that government agencies are able to effectively and efficiently perform their missions while enhancing service delivery to the taxpayer. Today, eGovernment is a top priority for the federal government. The promise of eGov is revolutionary, but we face severe implementation challenges. As we heard at a hearing on acquisition reform before this Subcommittee in May of this year, too many of our complex IT procurements continue to fail–upwards of forty percent.

In addition, we have over 1300 different eGovernment initiatives underway, but we have no measurements of which projects are worthwhile or which should be expanded cross-agency, or cross-government to truly make service more accessible. I am pleased the Administration has just named an Associate Director of Information Technology within OMB and a new eGov council to review and assess IT spending. However, I believe we need individuals who can work daily on reviewing the status of IT modernizations or cross-agency initiatives to assist in the success of this new team. Unfortunately, the government cannot attract mid-level IT managers who can perform these functions.

That is why I have introduced legislation today to create a Digital TechCorps. I believe that we can help government transform itself by creating a new vision of public service for this century. According to the National Academy of Public Administration (NAPA) study on the federal IT workforce, the primary barriers to recruiting new IT workers are salary, and length of time between job announcement and the actual hiring of an individual. Moreover, of the five categories identified by IT professionals when considering job opportunities, the federal government receives a low score in all but one category. The creation of a TechCorps will help eliminate those hurdles. First, my proposal sets up an exchange program that can begin as soon as an agency negotiates an exchange agreement with a private sector entity. Next, the private sector individual will come into government at the GS-12 through 15 level for a period of up to two years, but they will continue to receive pay and benefits from their private sector employer. In addition, the federal government's mid-level IT managers will have the opportunity to go work for a private sector company for up to two years while retaining their government pay and benefits. This type of public-private exchange program will allow for greater knowledge and understanding between the public and private sectors. I believe it will foster greater innovation and partnership for government and industry. It really is a win-win scenario.

The federal government sits on the brink of tremendous opportunity. We must utilize every tool available to us in order to achieve real transformation. This includes a comprehensive review of our human capital management. For too long, the federal government has been considered the employer of last resort. This despite the tireless efforts of federal employees who continue to be treated as costs to be cut rather than the greatest asset of every agency and bureau within government. I look forward to discussing what creative solutions can be brought to bear against the looming crisis facing our government today.

Mr. TURNER. Thank you, Mr. Chairman. Today's hearing will focus on the challenges the government faces in attracting and retaining a skilled information technology work force, and on possible innovative approaches to addressing those challenges.

This hearing is very timely. Despite the recent slowing growth of the U.S. economy, the unemployment rate still remains below 5 percent, and it has been there since 1997. We know that much of the employment growth that has occurred in this economy has been attributed to the growth of information technology, and the rise of the so-called dot.coms. The demand for highly skilled information technology workers has consequently grown at an unusually rapid pace, despite the recent downturn in our economy, and the resulting layoffs that we have seen.

A recent study by the Information Technology Association of America found that U.S. companies will seek to fill 900,000 new IT positions in the near future, and 425,000 of those positions will go unfilled because of lack of applicants.

The shortage of information technology workers is exacerbated in the Federal sector for a variety of reasons, the disparity in pay between the private sector and the government. Two years ago, the Commerce Department found that starting salaries for computer science graduates from the Federal Government averaged $10,000 to $15,000 less than the starting salaries paid in the private sector. The Office of Personnel Management has recently attempted to address this disparity, and I look forward to hearing from the directors this morning regarding progress that we have made.

We also need to examine the important nonpay benefits, such as training for career advancement opportunities and family friendly benefits, flexible work schedules, and meaningful recognition for individual performance as a way to attract and retain individuals with information technology skills. With its generally recognized good benefits packages, this is an area the Federal Government may be able to use to help attract IT workers.

I was pleased yesterday that this committee's bill regarding allowing Federal employees to keep their frequent flyer miles was passed on the floor of the House, a small step toward increasing attractiveness of Federal employment. I commend the chairman for the legislation that he has announced today on the Digital TechCorps. I think it is an innovative approach to business by creating an exchange program between the public and the private sectors for technology managers.

Mr. TOM DAVIS OF VIRGINIA. I could hear you fine, just for the record.

Mr. TURNER. Particularly that last sentence. And I do, Mr. Chairman, look forward to working with you on this innovative idea.

Thank you.

[The prepared statement of Hon. Jim Turner follows:]

Statement of the Honorable Jim Turner
Oversight Hearing: "Public Service for the 21st Century: Innovative Solutions to the Federal Government's Technology Workforce Crisis"
Subcommittee on Technology and Procurement Policy

July 31, 2001

Thank you Mr. Chairman. Today's hearing will focus on the challenges the government faces in attracting and retaining a skilled information technology workforce, and on possible innovative approaches to addressing those challenges.

This hearing is especially timely. Despite the recent slowing growth of the U.S. economy, the unemployment rate has remained below 5% since mid-1997. Much of this growth has been attributed to information technology and the rise of the so-called "dot-come" economy, The demand for highly-skilled information technology workers has consequently grown at a rapid pace. A recent study by the Information Technology Association of America found that U.S. companies will seek to fill 900,000 new IT positions, and that 425,000 of those positions will go unfilled because of a lack of applicants.

The shortage of information technology workers is exacerbated in the federal sector due to the disparity in pay between the private sector and the government. Two years ago, the Commerce Department found that starting salaries for computer science graduates in the federal government averaged 10 to 15 thousand less than those paid by the private sector. The Office of Personnel Management has recently attempted to addressed this disparity, and I look forward to hearing whether it has in fact been eliminated.

We also need to examine important non-pay benefits, such as training, career advancement opportunities, family-friendly benefits, flexible work schedules, and meaningful recognition for individual performance as a way to attract and retain individuals with needed information technology skills. With its generally recognized good benefit packages, this is an area the federal government may be able to use to help meet its IT workforce needs.

The Chairman has announce legislation which would address one aspect of this problem with the creation of an exchange program between the public and private sectors for information technology managers. The idea sounds like a good one, and I look forward to working with you on your bill. Thank you.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much. Mr. Horn.

Mr. HORN. Thank you, Mr. Chairman. This is one of the most leading issues that affects the executive branch, the legislative branch, government all over America. And I commend the Comptroller General, Mr. Walker, who has been on this for months, and that's human capital, not just building bridges and everything else. They're important, but if we don't educate our human capital the government will not have the talent it should have.

The President of the United States should tell everyone of his political appointees that you spend a few days on a college campus, either the community colleges, the private colleges, the State universities, which are the ones that really turn out most of the individuals that go into the government. The Services have done well with upgrading their people, sending them off to universities for master's degrees, doctor's degrees, and that has happened.

We also ought to think about the retirees that are gone in some areas, private, public, local, State, Federal, and these are very talented people. They still have a lot to give and we ought to work with those individuals, have retraining, have a chance to upgrade their skills and help us. And those of us in Congress who are elected, we ought to be out to the college campuses and doing what we know, that you never get as much responsibility in many of the service opportunities with millions of dollars of equipment, millions of dollars in human capital, and we ought to also start with the Department of Education to work with those that know how to educate people in IT and that they must do some work basically on the campuses in their area, and we ought to be there right with people from the executive branch and without that, and we ought to start in kindergarten on educating people. And I think it's a shame when we are importing people from abroad when these are $60,000 jobs you're talking in technology, and there ought to be a sequential education in terms of logic, computing, a liberal arts education, a number of things. And we ought to get to it right now.

Thank you, Mr. Chairman.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much, Mr. Horn. I'll now call on our first panel of witnesses to testify. David Walker, the Comptroller General of the General Accounting Office; Kay Coles James, the Director of the Office of Personnel Management. This is your first time. Is it your first time up here, Kay?

Ms. JAMES. Absolutely, yes.

Mr. TOM DAVIS OF VIRGINIA. Kay is a Fairfax County veteran, served on the school board when I was chairman of the county board. It's great to have you here. And Stephen Perry, the Administrator of the General Services Administration. If you would just please rise. It's the policy of this committee that all witnesses be sworn before they testify.

[Witnesses sworn.]

Mr. TOM DAVIS OF VIRGINIA. Thank you very much. You can be seated. We have read everybody's statement. What I'd like to do is try to sum up in 5 minutes. You'll have a light in front of you. It's green but after 4 minutes it turns orange and that gives you a minute to sum up, and then we'll go right to questions.

Thank you very much. Mr. Walker, we'll start with you and move straight down.

STATEMENTS OF DAVID WALKER, COMPTROLLER GENERAL, U.S. GENERAL ACCOUNTING OFFICE; KAY COLES JAMES, DIRECTOR, OFFICE OF PERSONNEL MANAGEMENT; AND STEPHEN PERRY, ADMINISTRATOR, U.S. GENERAL SERVICES AGENCY

Mr. WALKER. Thank you, Mr. Chairman. It's a pleasure to be here today to address the Federal Government's human capital or people challenges with a specific emphasis on the information technology and acquisitions work forces. I would ask that my entire statement be inserted into the record, Mr. Chairman, and I will move to summarize that statement at this time.

GAO, as you know, designated human capital strategic planning, or I should say the lack thereof, as a high risk area in its January 2001 high risk update. This is due in part to the after effects of the downsizing of the Federal Government in the 1990's. Those after effects include a smaller government, but one that is out of shape with skills and balances in major success planning challenges. Many agencies and functions are at risk of not being able to effectively achieve their mission in the future as a result of these challenges. The acquisition and the IT work forces, based upon the preliminary work that we've done, appear to be at above average risks as compared to other Federal agencies and functions in the human capital area. Failure to effectively address these human capital challenges in a timely, reasonable and responsible manner will have serious adverse consequences.

First, it will serve to reduce the economy efficiency and effectiveness along a broad range of governmental activities. Second, it will slow the effects of government's attempt to better connect itself with its citizens and to improve overall responsiveness. And in addition, it will end up serving to increase potential national security or personal privacy threats associated with rapidly evolving technologies and related trends.

Human capital strategic management is not the only high risk area with people dimensions on GAO's latest high risk list. For example, we noted that the IRS, the FAA and the DOD's systems modernization efforts are also deemed to be high risk. Clearly the people aspect of these areas represent a major contributing factor to the high risk designation. In addition, DOD and NASA's contract management functions are also deemed to be high risk. Clearly, the people element associated with these functions are a major contributing factor as to why they're deemed to be high risk.

Irrespective of whether certain governmental functions are performed or—pardon me. Even if certain governmental functions are performed by contractors, it is absolutely essential that the government retain an adequate number of skilled and knowledgeable professionals to be able to maintain—to be able to manage cost, quality and performance of said contractors. All too frequently this is not the case.

In addition, DOD's weapons acquisitions programs and practices are also on our high risk list, in part because of the planned turnover of key program officials which serves to decrease the effectiveness and the accountability of these major development programs.

And there are various Federal programs that are on our high risk list, of which the human capital dimension is a major contributing factor, including the Postal Service, the SSI program, the Medicare program and selected HUD programs.

Many individuals have a role to play in effectively addressing these human capital challenges from the President, to OMB and OPM, to heads of different departments and agencies, to GAO, to the Congress to the press and many others.

We believe at GAO that a three-step approach should be taken to address this challenge. First, every agency should do everything they can within the context of current law to address these issues. We believe that at least 80 percent of what needs to be done can be done in the context of current law.

Second, selected legislative reforms that would provide management with some reasonable flexibility and enhance the appreciation that the government has for its employees should also be considered. The frequent flyer legislation that Congressman Turner mentioned is a small step, but it sends a big signal.

In addition, we need to build the consensus for broader Civil Service reforms in the future, which reforms should be based primarily on placing additional emphasis on skills, knowledge and performance as a basis for hiring, promoting, rewarding and disciplining Federal employees, rather than the passage of time and the rate of inflation, which is all too frequently the case. GAO is attempting to lead by example in this area.

Figure 3 on page 15 notes a number of administrative systems that we have already taken. Figure 4 on page 16 notes a number of legislative actions that we've also taken as well in order to try to help us serve the Congress and the American people. We also note on pages 18 and 19 of my statement other possible incremental legislative reforms, including the possibility of fellowship programs, which would be very similar in concept, Mr. Chairman, to the legislation that you introduced today.

In summary, the government overall and the IT and acquisitions work force in particular, face an array of challenges. Government must begin to treat its people as an asset to be valued rather than a cost to be cut. In a knowledge-based economy of which people are the source of all knowledge, it is critical that the Federal Government have top quality professionals. The Federal Government represents 18 to 20 percent of the U.S. economy. It is the only superpower on Earth. We cannot afford to have anything less than top flight professionals managing that type of enterprise. The stakes are simply too great to do otherwise.

Government must focus more on results rather than process in discharging its responsibilities, and the key missing link in this regard is the lack of effective human capital management, both as it relates to administrative matters, as well as the need for legislative reforms in this area.

We will at GAO, Mr. Chairman, look to work with the Congress in trying to help maximize the performance and assure the accountability of the government, both overall and in the area of human capital.

Thank you very much.

[The prepared statement of Mr. Walker follows:]

United States General Accounting Office

GAO

Testimony

Before the Subcommittee on Technology and Procurement Policy
Committee on Government Reform, U.S. House of Representatives

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HUMAN CAPITAL

Building the Information Technology Workforce to Achieve Results

Statement of David M. Walker
Comptroller General of the United States

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GAO-01-1007T

Human Capital: Building the Information Technology Workforce to Achieve Results

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to discuss with you this morning the federal government's strategic human capital management challenges, with particular emphasis on the information technology area.

No management issue facing federal agencies could be more critical to their ability to serve the nation than their approach to attracting, retaining, and motivating people. The need is a reflection of the times: Our society has transitioned from the industrial age to the knowledge age, and people are the source of all knowledge. Every organization today depends on its people to contribute knowledge, create knowledge, and put knowledge to practical use. Federal agencies are no different. For these organizations, having sufficient numbers of people on board with the right mix of knowledge and skills will make the difference between success and failure. This is especially true in the information technology area, where widespread shortfalls in human capital have contributed to demonstrable shortfalls in agency and program performance.

I would like to make two main points:

First, the federal government today faces pervasive human capital challenges that are eroding the ability of many agencies—and threatening the ability of others—to economically, efficiently, and effectively perform their missions. Many parties will need to work to address these challenges, including the President, department and agency leaders, the Office of Management and Budget, the Office of Personnel Management, the Congress, the private sector, foundations and academia, and even the press.

Second, how successfully the federal government acquires and uses information technology will continue to hinge on its ability to build, prepare, and manage its information technology workforce. However, agencies must overcome two basic challenges related to IT human capital: a shortage of skilled workers and the need to provide a broad range of related staff training and development. These are essential challenges to address so that the managers and staff can effectively operate and maintain government systems, adequately oversee related contractor support, and deliver responsive service to the public.

In addition to discussing these two main points, at the Subcommittee's request I will briefly discuss selected GAO human capital efforts. Also, I will briefly discuss human capital challenges facing the government's acquisitions workforce.

Background: What We Mean By "Human Capital"

We at GAO use the term "human capital" because—in contrast to traditional terms such as personnel and human resource management—it focuses on two principles that are critical in a modern, results-oriented management environment. First, people are assets whose value can be enhanced through investment. As the value of people increases, so does the performance capacity of the organization and therefore its value to clients and other stakeholders. As with any investment, the goal is to maximize value while managing risk. Second, an organization's human capital approaches must be aligned to support the mission, vision for the future, core values, goals and objectives, and strategies by which the organization has defined its direction and its expectations for itself and its people. An organization's human capital policies and practices should be designed, implemented, and assessed by the standard of how well they help the organization pursue these intents and achieve related results.

It is clear that, in many government entities and functional areas such as information technology and acquisitions, the transition to modern, results-oriented management—and along with it, to strategic human capital management—will require a cultural transformation. Hierarchical management approaches will need to yield to partnerial approaches. Process-oriented ways of doing business will need to yield to results-oriented ones. And siloed organizations will need to become integrated organizations if they expect to make the most of the knowledge and skills of their people. Government entities that expect to ensure accountability for performance and make the best use of their human capital will need to build a solid foundation in strategic planning and organizational alignment, leadership and succession planning, recruiting and training the best possible talent, and creating a strong performance culture—including appropriate performance measures and rewards and a focus on continuous learning and knowledge management.

A key step for agencies is to focus on human capital as a strategic asset. Agencies can begin by assessing how well their existing human capital approaches support their missions, goals, and other organizational needs. A useful self-assessment tool is our human capital checklist, which identifies a number of human capital elements and underlying values that are common to high-performing organizations.[1] (See attachment I.) We have used the checklist's assessment framework to guide our recent inquiries into human capital issues across the federal government and at specific agencies, some of which are using the framework in their human capital planning efforts. We have also used this framework to assess and guide our own internal GAO efforts.

Strategic Human Capital Management: Confronting The High-Risk Challenge

High-performing organizations in the private and public sectors have long understood the relationship between effective "people management" and organizational success. However, the federal government, which has often acted as if federal employees were costs to be cut rather than assets to be valued, has only recently received its wake-up call. As our January 2001 Performance and Accountability Series reports made clear, serious federal human capital shortfalls are now eroding the ability of many federal agencies—and threatening the ability of others—to economically, efficiently, and effectively perform their missions.[2] Agencies' strategic human capital management challenges involve such key areas as strategic human capital planning and organizational alignment; leadership continuity and succession planning; acquiring and developing staffs whose size, skills, and deployment meet agency needs; and creating results-oriented organizational cultures. Attachment II provides examples of the federal government's pervasive human capital challenges, from military recruitment shortfalls at the Department of Defense to staff and skills losses at the National Aeronautics and Space Administration to inadequate workforce planning at the Environmental Protection Agency.

In January 2001, we added strategic human capital management to our list of federal programs and operations identified as high risk.[3] However, we continue to stress that federal employees are not the problem. Rather, the problem is a long-standing lack of effective leadership and management, along with the lack of a strategic approach to marshaling, managing, and maintaining the human capital needed for government to discharge its responsibilities and deliver on its promises. After a decade of government downsizing and curtailed investments in people, it is becoming increasingly clear that today's federal human capital strategies are not appropriately constituted to meet the current and emerging needs of the nation's government and its citizens. The federal government's approach to people management includes a range of outmoded attitudes, policies, and practices that warrant serious and sustained attention. To view federal employees as costs to be cut rather than as assets to be valued would be to take a narrow and shortsighted view—one that is obsolete and must be changed.

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[1] See *Human Capital: A Self-Assessment Checklist for Agency Leaders* (GAO/OCG-00-14G, Sept. 2000).

[2] *Performance and Accountability Series—Major Management Challenges and Program Risks: A Governmentwide Perspective* (GAO-01-241, Jan. 2001). In addition, see the accompanying 21 reports, numbered GAO-01-242 through GAO 01-262, on specific agencies.

[3] *High-Risk Series: An Update* (GAO-01-263, Jan. 2001). In addition, see *Human Capital: Meeting the Governmentwide High-Risk Challenge* (GAO-01-357T, Feb. 1, 2001).

Ever since we added strategic human capital management to our high-risk list, we have been asked what would need to happen for it to be removed. Clearly, we will need to see measurable and sustainable improvements in the economy, efficiency, and effectiveness with which the government as a whole and the individual agencies manage their workforces to achieve their missions and goals. I believe that congressional hearings such as today's demonstrate that the momentum for these improvements is building, but the process will undoubtedly take time.

Clearly, there is very little time to waste. Changes in the demographics of the federal workforce, in the education and skills required of its workers, and in employment structures and arrangements are all continuing to unfold. The federal workforce is aging; the baby boomers, with their valuable skills and experience, are drawing nearer to retirement; new employees joining the federal workforce today have different employment options and different career expectations from the generation that preceded them. In response to an increasingly competitive job market, federal agencies will need the tools and flexibilities to attract, retain, and motivate top-flight talent. More and more, the work that federal agencies do requires a knowledge-based workforce that is sophisticated in new technologies, flexible, and open to continuous learning. This workforce must be adept both at delivering services directly and at effectively managing the cost and quality of services delivered by third parties on the government's behalf. Agencies' employment structures and working arrangements will also be changing, and the workplace will need to accommodate a greater mix of full-time, part-time, and temporary workers; more contracting-out; less job security; and the possibilities of additional government downsizing and realignments.

With these challenges in mind, it is clear that federal agencies must not wait to modernize their human capital policies and practices. Key elements such as hiring, staffing, compensation, promotions, training and development, and performance management all need to be aligned with organizational missions and goals, and must be approached as interrelated parts of a coherent human capital management strategy. Other elements must also be considered. In the information area in particular, other key elements will include sourcing, contract oversight, knowledge management, and systems development. Overall, and in critical occupational areas, agencies can and must take the initiative to be more competitive in attracting new employees with needed skills; design and implement modern, effective and credible performance evaluation systems; create the kinds of performance incentives and training programs that motivate and empower employees; and build labor-management relationships that are based on common interests and the public trust. To shape human capital strategies that support their specific needs and circumstances, agencies must give strategic human capital management the enhanced and sustained attention it deserves, modernize their existing human capital policies and practices, and identify and make use of the tools and flexibilities available to them under current law.

To address the federal government's human capital challenges as a whole, we believe a three-stage approach is appropriate. First, agencies must take all administrative steps available to them under current laws and regulations to manage their people for results. Much of what agencies need to accomplish by way of focusing on human capital management is already available to them.[4] They will, however, need the sustained commitment from top management and the support from both the Office of Management and Budget (OMB) and the Office of Personnel Management (OPM) to make the most of their existing authorities. Second, the Administration and the Congress should pursue selected legislative opportunities to put new tools and flexibilities in place that will help agencies attract, retain, and motivate employees—both overall and, especially, in connection with critical occupations such as those in IT. Third, all interested parties should work together to determine the nature and extent of more comprehensive human capital (or civil service) reforms that should be enacted over time. These reforms should include greater emphasis on skills, knowledge, and performance in connection with federal employment and compensation decisions, rather than the passage of time and rate of inflation, as is often the case today.

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[4] *See Human Capital: Taking Steps to Meet Current and Emerging Human Capital Challenges* (GAO-01-965T, July 17, 2001).

Mr. Chairman, as is clear from the array of witnesses you have gathered for today's hearing, addressing the federal government's human capital challenges is a responsibility shared by many parties. This includes the President, department and agency leaders, OMB, OPM, the Congress, the private sector, foundations and academia, and even the press. (See attachment III). As I have noted elsewhere, strategic human capital management has yet to find the broad conceptual acceptance or political consensus needed for comprehensive legislative reform to occur. In this sense, human capital remains the missing link in the framework of federal management reforms enacted by the Congress over the past decade—reforms that addressed such essential elements of high performing organizations as financial management, information technology management, and results-oriented goal-setting and performance measurement. However, I believe that the day is approaching when we will see comprehensive federal human capital legislative reform. The essential ingredients for progress in this area are leadership, vision, commitment, persistence, communications, and accountability.

Notably, OPM and OMB have taken steps in the past year to help raise awareness of the federal government's human capital challenges and to encourage and enable agencies to make progress in this area. For example, OPM has begun stressing to agencies the importance of integrating strategic human capital management with agency planning and has also been focusing more attention on developing tools to help agencies, such as new Senior Executive Service performance standards and a workforce planning model with associated Web-based research tools. Some of OPM's efforts have been directed specifically at addressing human capital challenges in the information technology area. For example, in January 2001, OPM created a new special-rate authority to boost the pay of approximately 33,000 current federal information technology workers covered by the General Schedule (GS) at grades GS-5, 7, 9, 11, and 12. Both current and new federal employees are covered by the new pay rates. Further, OPM has issued a new "job family" classification standard for IT-related positions that revises and updates the previous standard and incorporates many formerly separate IT-related occupations into one. The new special pay rates and classification standard are intended to give agencies more flexibility in their IT-related recruiting and retention efforts.

OMB's role in setting governmentwide management priorities and defining resource allocations will be critical to inducing agencies to integrate strategic human capital into their core business processes. Toward that end, OMB has made strategic management of human capital one of the five key elements of the President's Management and Performance Plan, along with budget and performance integration, expand competitive sourcing, improving financial performance, and expanding e-government.

OMB's current guidance to agencies on preparing their strategic and annual performance plans states that the plans should set goals in such areas as recruitment, retention, and training, among others. Further, early this year, OMB instructed agencies to submit a workforce analysis by June 29, 2001. Each agency's analysis was to include summary information on the demographics of the agency's permanent, seasonal, and temporary workforce; projected attrition and retirements; an evaluation of workforce skills; expected changes in the agency's work; recruitment, training, and retention strategies being implemented; and barriers to maintaining a high-quality and diverse workforce. The information that agencies were to develop may prove useful in identifying human capital areas needing greater attention and, moreover serve as an important first step toward the development of agency-specific 5-year restructuring plans in the context of the agencies' fiscal year 2003 budget requests and annual performance plans.

Our experience so far indicates that most agencies have a way to go before producing human capital strategies that are integrated with their strategic and programmatic planning processes. For example, earlier this year, we reported on the extent to which the 24 agencies covered by the Chief Financial Officers Act discussed human capital issues in their fiscal year 2001 performance plans.[5] Overall, agencies' plans reflected different levels of attention to human capital, ranging from merely identifying human capital challenges to putting forward solutions to address those challenges, such as defining actual plans, committing resources, and assigning accountability. We found that, in general, agencies needed to increase the breadth, depth, and specificity of many related human capital goals and strategies and to better link them to the agencies' strategic and programmatic planning. Currently, we are preparing a summary of agencies' attention to human capital issues in their fiscal year 2002 performance plans. Although the summary is not yet complete, our preliminary review indicates that the agencies continue to have difficulty in linking their human capital goals to meaningful performance measures or programmatic results. For example, agencies' workforce planning efforts generally were not targeted toward specific agency programmatic outcomes.

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[5] *Managing for Results: Human Capital Management Discussions in Fiscal Year 2001 Performance Plans* (GAO-01-236, Apr. 24, 2001). As part of the Government Performance and Results Act annual performance planning requirements, agencies are to establish results-oriented performance goals and describe the strategies and resources—including human capital—needed to accomplish those goals.

Rapid Changes In Information Technology Require A Skilled And Well-Managed Workforce

As agencies wrestle with human capital management, they face a significant challenge in the information management and technology area. The rapid pace of technological change and innovation in the current information age poses wide-ranging opportunities for improved information management and enhanced performance in achieving agency missions and goals. Investments in information technologies alone are expected to account for more than 40 percent of all capital investment in the United States by 2004. The federal government's IT investment is conservatively estimated in fiscal year 2002 to be $44 billion—an increase in federal IT spending of 8.6 percent from fiscal year 2000.[6] This investment is substantial and should provide opportunities and demonstrate real results for increasing productivity and decreasing cost. Already, we have over 1,300 electronic government initiatives under way throughout the federal government, covering a wide range of activities involving interaction with citizens, business, other governments, and employees[7].

However, federal executives and managers must also be cognizant of the responsibilities and challenges that accompany these opportunities. Among these challenges are:

- *sustaining* committed executive leadership and involvement in technology initiatives;
- *building* effective e-government business cases that identify full costs and expected benefits;
- *maintaining* a citizen focus in service delivery;
- *protecting* personal privacy and providing a secure computing environment to reduce the risks of unauthorized access, which can lead to fraud, theft, destruction of assets, and service disruptions;

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[6] *The Clinger-Cohen Act Report,* Office of Management and Budget (April 9, 2001)

[7] *Electronic Government: Challenges Must Be Addressed With Effective Leadership and Management* (GAO-01-959T, July 11, 2001).

- *developing* adequate capabilities for storing, retrieving, and when, appropriate, disposing of electronic records;
- *providing* a robust technical infrastructure guided by sound enterprise architectures; and
- *ensuring* uniform service to the public using multiple methods of access to government services and process. [8]

Additionally, the rush to electronic government can lessen the emphasis on the critical human element. Agencies must overcome two basic challenges related to IT human capital—a shortage of skilled workers and the need to provide a broad range of related staff training and development. These are essential challenges to address so that that staff can effectively operate and maintain new e-government systems, adequately oversee related contractor support, and deliver responsive service to the public.

Indeed, in our own study of public and private sector efforts to build effective Chief Information Officer (CIO) organizations,[9] we found that leading organizations develop IT human capital strategies to assess their skill bases and recruit and retain staff who can effectively implement technology to meet business needs. Figure 1 provides an overview of a common strategy that organizations in our study used to secure human capital for information management.

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[8] GAO-01-959T, July 11, 2001.

[9] *Maximizing the Success of Chief Information Officers: Learning from Leading Organizations* (GAO-01-376G, February 2001).

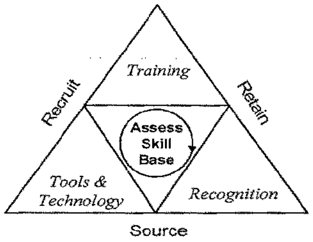

Figure 1: Strategy for Securing IT Human Capital in Leading Organizations

Leading organizations assess their IT skills on an ongoing basis to determine what expertise is needed to meet current responsibilities and support future initiatives. Needed skills are compared with existing capabilities in the organization to determine gaps in the IT skills base. Strengthening IT skills and capabilities identified in the gap analysis is addressed though training and innovative hiring practices as part of a formula for building information technology and management capabilities. Further, we found effective CIO organizations cultivate expertise in their internal workforces while outsourcing skills that are available from multiple sources at lower cost. In short, effective staffing and sourcing strategies provided the organizations we studied with dynamic, flexible workforces that can execute IT management functions to meet changing business needs and priorities.

As agencies complete their skills inventories and perform gap analyses against existing and future IT requirements, it will be important for executives to determine an appropriate IT sourcing strategy. This should include an examination of the current and future IT market and a corresponding assessment of the agency's ability to attract, hire and retain managers and staff the needed skills. This information should inform strategic decisions about the appropriate nature and scope of IT sourcing needs that are both short and longer-term in nature. Agency executives should also differentiate between core skills needed to maintain a IT management "steady state" versus just-in-time needs in hot skills areas to address peak workloads brought about by events such as the Year 2000 date conversion crisis, immediate computer security vulnerabilities, or creation of publicly accessible on-line forms required by legislative or executive branch deadlines. Irrespective of the final decisions regarding what IT functions are performed by federal employees or contractors, agencies must have an adequate number of skilled IT professionals to oversee the cost, quality, and performance of IT contractors.

It is also important to note that the IT human capital challenge is not just an issue unique to our government or nation alone. The Organization for Economic Co-operation and Development (OECD)—an international organization that studies how governments organize and manage the public sector and identifies emerging challenges that governments are likely to face—recently issued a report discussing the recurring problem of the lack of IT skills in the public sector.[10] The report found that the lack of IT skills makes it impossible for some countries to develop technology in-house and establishes an imbalance in relations between purchasers and providers. Moreover, as in the United States, against the background of a very tight IT labor market and an ever-increasing demand for highly qualified staff, the report noted that the competitiveness of the public employer has to be visibly strengthened.

Interestingly, solutions seem to vary according to the different traditions in OECD member countries and can include higher wages, differentiated pay systems, better knowledge management, and better human resources management. For example, many countries have undertaken knowledge management initiatives, including training of staff and collecting IT-related information in databases. To illustrate, the United Kingdom has set up a database on all high-profile public sector IT-enabled projects, including project descriptions as well as a list of people running these initiatives. The database is expected to allow existing resources to be incorporated in future projects.

Demand for Skilled IT Workers Remains Substantial Despite Recent Slowdown

The demand for IT workers remains robust despite the decrease in demand over the last year. Notwithstanding the recent economic slowdown, employers from every sector, including the federal government, are still finding it difficult to meet their needs for highly skilled IT workers. In the long term, demand is expected to increase. The Bureau of Labor Statistics projects that the demand for computer systems analysts, engineers, and scientists will almost double between 1998 and 2008 and the demand for computer programmers will increase by 30 percent during the same time period. While recent data indicate a slowing demand, the ability of the United States to meet this demand is still considered a problem.[11] In April, the Information Technology Association of America (ITAA) released a study on the size of the private-sector IT workforce, the demand for qualified workers and the gap between the supply and demand.[12] Among the study's top findings were the following:

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[10] *The Hidden Threat to E-Government: Avoiding Large Government IT Failures*, OECD Public Management Policy Brief Number 8 (Mar. 2001).

- Information technology employment remains at the forefront of the United States economy, directly accounting for approximately 7 percent of the nation's total workforce. Over 10.4 million people in the United States are IT workers, an increase of 4 percent over the 10 million reported for last year.
- The demand for IT workers—while slowing—remains substantial, as employers attempt to fill over 900,000 new IT jobs in 2001. For example, the demand for skilled IT workers by large IT firms has doubled over the year 2000 figure. However, ITAA has noted that overall demand for IT workers is down 44 percent from last year's forecast, attributable in part, to the slowdown in the high tech sector and the economy in general. Still, the drop does not reflect a fall-off in IT employment, which will increase year to year.
- The talent gap for IT workers remains large. Hiring managers reported an anticipated shortfall of 425,000 IT workers because of a lack of applicants with the requisite technical and non-technical skills.

The ITAA also reported that despite softening in overall demand, technical support, database development/administration, programming/software engineering, web development/administration, and network design/administration are the "hot skills" that remain most in demand by IT and non-IT companies alike. These positions represent nearly 86 percent of the demand for IT workers. The study further notes that the demand for enterprise systems professionals and network designers and administrators increased by 62 percent and 13 percent respectively. The increases suggest that companies may be staffing less in anticipation of winning new business and concentrating instead on rationalizing technology investments, tightening operations and making infrastructure improvements.

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[11] "The 1998-2008 Job Outlook in Brief" Occupational Outlook Quarterly (Bureau of Labor Statistics, Spring 2000).

[12] *When Can You Start? Building Better Information Technology Skills and Careers*, Information Technology Association of America (April 2001).

Sustained Attention to Federal IT Human Capital Challenges Is Key to Achieving Agency Performance Improvements

As is apparent, the need for qualified IT professionals has placed the public sector in direct competition with the private sector for scarce resources. For the second consecutive year, federal CIOs have identified the need for skilled IT workers as their most critical issue.[13] This is related to the stark reality that a substantial portion of the federal workforce will retire between fiscal years 1999 and 2006. We recently estimated that by 2006 about 31 percent[14] of 24 major departments and agencies' employees working in 1998 will be eligible to retire, and that through the end of 2006 about half of those eligible will actually retire.[15] In the area of IT, all 24 major departments and agencies reported that they consider the occupation in the computer specialist series as mission-critical. We estimated that 30 percent of the employees in this series would be eligible to retire by the end of fiscal year 2006 and that 14 percent would retire by then. (See figure 2).

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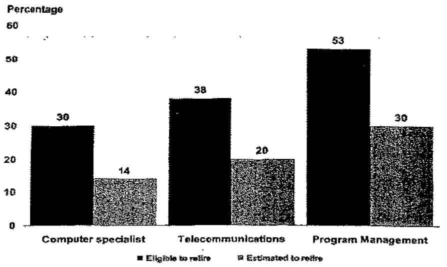
[13] *Update: Implementation of the Federal IT Workforce Challenge Recommendations*, Chief Information Officers Council, Federal IT Workforce Committee (Mar. 21, 2001).

[14] The eligibility estimate of 31 percent is based on cumulative data, which includes those already eligible and those reaching retirement eligibility between fiscal years 1999 through 2006, less the estimated 4 percent who are estimated to leave before they become eligible to retire.

[15] *Federal Employee Retirements: Expected Increase Over the Next 5 Years Illustrates Need for Workforce Planning* (GAO-01-509, Apr. 27, 2001).

Figure 2: Eligible and Estimated Percentage of Selected Federal Workforce to Retire in FY 2006



Source: *Federal Employee Retirements, Expected Increase Over the Next 5 Years Illustrates Need for Workforce Planning* (GAO-01-509, Apr. 27, 2001).

Federal organizations such as OPM and the federal CIO Council are taking a number of steps towards developing solutions for the federal government's IT human capital solutions. For example, as I mentioned earlier, in January 2001 OPM established higher pay rates for new and currently employed computer specialists, computer engineers, and computer scientists at grades GS-5, 7, 9, 11, and 12—the levels at which OPM identified the most severe federal IT staffing problems and at which it found that GS salaries lag far behind non-federal salaries. In combination with the across-the-board GS increase, the special pay rates produced overall net increases ranging from 7 percent to 33 percent for most affected employees. The special rates are designed to help agencies address significant problems in recruiting high-quality entry- and developmental-level federal IT workers with the latest skills. OPM has stated that it will continue to monitor the IT staffing situation to determine whether the special rates should be expanded. It will be important to track how the salary increases affect the federal government's ability to hire and retain qualified IT professionals.

The CIO Council also has a Federal IT Workforce Committee focused on facilitating activities designed to (1) improve the federal government's ability to attract and retain a top-notch IT workforce and (2) expand effective IT education and training opportunities for the existing federal workforce.[16] Among the Council's initiatives is the support of the CIO University, which is a collaborative effort between the federal government and private institutions to develop IT executives and support of the Strategic and Tactical Advocates for Results (STAR) program. STAR is a graduate-level program designed to create an optimal learning environment for professionals. The Council also committed to reviewing and revising the CIO core competencies on a biennial basis. These competencies serve as a tool for determining IT skills, knowledge, and education requirements.

To help better understand the magnitude of federal IT human capital issues and possible alternatives for new solutions, the CIO Council and the Administrative Office of the U.S. Courts asked the National Academy of Public Administration (NAPA) to study IT compensation strategies and to make recommendations on how the government can best compete for IT talent. NAPA has completed and reported on the first phase of this study. NAPA expects to complete its final report by mid-September. It will contain an evaluation of alternative compensation models and address recommended solutions.

Table 1 summarizes NAPA's overall comparison of compensation and work factors among various sectors, which demonstrates some of the similarities and differences among the sectors. NAPA's high, medium, and low designations shown below are based on an overall evaluation of data and information obtained for organizations in each sector in comparison with the other sectors.

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[16] *Strategic Plan: Fiscal Year 2001-2002*, Chief Information Officers Council (October 2000).

Table 1: Overall Comparison of Compensation and Work Factors

Sector	Salary levels	Work-life benefits	Rewards/ recognition	Advancement/ Training	Use of recruiting tools
Federal	Low	High	Low	Low	Low
State	Low	Medium	Medium	Medium	Medium
Local	Low	Medium	Medium	Low	Low
Non-profit	Medium	Medium	Medium	Medium	High
Private	High	High	High	High	High
Academia	Medium	High	Medium	Medium	Medium

Source: *Comparative Study of Information Technology Pay Systems: Executive Study* (NAPA, March 2001).

Agencies' Progress in Addressing IT Human Capital Strategies Has Been Sluggish

To date, we have issued reports on the IT human capital management practices at two agencies—the Small Business Administration (SBA) and the United States Coast Guard. We also have similar work ongoing at the Social Security Administration and the Centers for Medicare and Medicaid Services.[17] Our evaluations have focused on agency practices in four areas:

- **Requirements**—assessing the knowledge and skills needed to effectively perform IT operations to support agency mission and goals
- **Inventory**—determining the knowledge and skills of current IT staff to identify gaps in needed capabilities
- **Workforce strategies and plans**—developing strategies and implementing plans for hiring, training, and professional development to fill the gap between requirements and current staffing
- **Progress evaluation**—evaluating progress made in improving IT human capital capability, and use the results of these evaluations to continuously improve the organization's human capital strategies

The results of our reviews indicate that although agencies are initiating strategies and plans to attract, retain, and/or train a skilled IT workforce, much remains to be done. Common weaknesses include a lack of (1) organizational commitment, (2) effective workforce planning, and (3) meaningful performance evaluation systems. For example, none of the agencies we reviewed had completed workforce planning activities, such as identifying knowledge and skill requirements and inventorying current staff capabilities. Further, none had developed and implemented mechanisms to evaluate progress in improving staff IT capabilities and therefore lacked the evaluation results that would have been used to continuously improve human capital strategies.

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[17] *Information Technology Management: SBA Needs to Establish Policies and Procedures for Key IT Processes* (GAO/AIMD-00-170, May 31, 2000) and *Information Technology Management: Coast Guard Practices Can Be Improved* (GAO-01-190, Dec. 12, 2000).

The ramifications of the deficiencies in the agencies' IT human capital management efforts are serious. Without complete assessments of IT skill needs, agencies will lack assurance that they have effectively identified the number of staff they will require with the specific knowledge and skills needed to sustain their current and future operations and developed strategies to fill these needs. Also, lacking an inventory of IT knowledge and skills, agencies will not have assurance that they are optimizing the use of current IT workforce nor have data on the extent of IT skill gaps. This information is necessary to developing effective workforce strategies and plans. Further, without analyzing and documenting the effectiveness of workforce strategies and plans, senior decisionmakers lack assurance that they are effectively addressing IT knowledge and skill gaps.

GAO Has Taken Steps To Meet Human Capital Challenges, Including Those In The It Area

At GAO, we have faced human capital challenges similar to those facing the federal government in general and the IT area specifically. However, we have made human capital management a top priority. We are undertaking a wide array of initiatives in this area and are investing considerable time, energy, and financial resources to make them work.[18] The aim of these efforts is to enhance our performance and assure our accountability by attracting, retaining, and motivating a top-quality workforce, including staff in critical occupations such as IT. We have identified and made use of a variety of tools and flexibilities, some of which were made available to us through the GAO Personnel Act of 1980 and some through legislation passed by the Congress in 2000, but most of which are available across the broad spectrum of federal agencies.

The past decade was a difficult one for ensuring that GAO's workforce would remain appropriately sized, shaped, and skilled to meet its mission demands. Severe downsizing of the workforce, including a suspension of most hiring from 1992 through 1997, and constrained investments in such areas as training, performance incentives and rewards, and enabling technology, left us with a range of human capital challenges that we have begun to address. We face certain skills imbalances that include a pressing need for information technology professionals, but also for other skilled professionals such as accountants, statisticians, economists, and health care analysts. Further, we face a range of succession planning challenges. Specifically, by fiscal year 2004, 55 percent of our senior executives, 48 percent of our management-level analysts, and 34 percent of our analyst and related staff will be eligible for retirement. Moreover, at a time when a significant percentage of our workforce is nearing retirement age, marketplace, demographic, economic, and technological changes indicate that competition for skilled employees will be greater in the future, making the challenge of attracting and retaining talent even more complex.

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[18] See *Human Capital: Taking Steps to Meet Current and Emerging Human Capital Challenges* (GAO-01-965T, July 17, 2001).

To address these challenges, we have taken numerous steps, all designed to support our strategic plan, which describes our role and mission in the federal government; our core values of accountability, integrity, and reliability that guide our work; the trends, conditions, and external factors underlying the plan; and our goals, objectives, and strategies for serving the Congress. From a human capital standpoint, our strategic plan and core values are our touchstones for designing, implementing, and evaluating our approaches to managing our people. These two vital elements will also be the foundation for our revised institutional and individual performance measurement and reward systems.

In addition to laying the groundwork through strategic planning, in the fall of 2000 we realigned our mission-related functions at headquarters and the field to better support the Congress and prepare ourselves, with current and expected resource levels, to meet the future challenges outlined in our strategic plan. As with strategic planning, organizational alignment is crucial if an agency is to maximize its performance and assure its accountability. The choices that go into aligning an organization to support its strategic and programmatic goals have enormous implications for further decisions about human capital management, such as what kinds of leaders the agency should have and how it will best ensure leadership continuity, how skills needs will be identified and filled—particularly in critical occupations such as IT—and what strategies the agency will use to steer the organizational culture to maximize its results.

We have taken many administrative steps to enhance the value of our human capital. (See figure 3).

Figure 3: Administrative Actions to Address GAO's Human Capital Challenges

- Self-assessment checklist
- Human capital profile/planning
- Employee feedback survey and suggestion program
- Employee Advisory Council
- Enhanced employee communications/participation
- Skills/knowledge inventory
- Employee preference survey
- Competency model/competency based appraisal system
- Workforce and succession planning
- Recruiting and college relations
- Training/development
- Recognition and rewards
- Flexitime and Flexiplace
- Business casual and business cards
- Enabling technologies
- Commuting subsidy (pending)
- College loan repayment fund (pending)
- Opportunity/Inclusiveness

Also, as seen in figure 4, we have pursued flexibilities that were made available to us through legislation. It should be noted that strategic human capital management is a work-in-progress for us, as it is for others. Our approaches are not the only way for agencies to proceed, but they can help others to see their way forward to addressing their individual human capital challenges.

Figure 4: Use of Legislative Flexibilities to Address GAO's Human Capital Challenges

- Broadbanding system for mission staff
- Excepted hiring authority (e.g., internship program)
- Special pay rates
- Senior Level for technical staff
- Targeted early outs and buyout authority
- Revised RIF rules

Among these challenges at GAO is the need to attract and retain IT and other technical staff. The steps we have taken to meet this challenge include the following:

- Expanding our overall recruiting efforts, to increase our presence at colleges and universities by leveraging technology and by our participation at area job fairs. To support our increased efforts, GAO is enhancing the existing Applicant Tracking System. This is an interim effort to render the system more user friendly and robust in order to meet the needs of GAO's staff involved in recruitment, while providing better service to GAO applicants. GAO is also exploring Web-based recruitment services that support the advertisement of vacancies, the receipt and processing of applications, and the development and maintenance of Web-based recruitment targeted for specific skills.
- Using a 25 percent pay differential (equal to the OPM pay differential for executive branch IT hires) to bring aboard entry-level technical staff for our IT team.
- Offering pay bonuses in attracting and retaining top IT talent with specific technical skill sets.
- Making wide use of contractor resources in the IT area to supplement both the numbers and skill sets of government employees. Currently, about 60 percent of the staff supporting GAO internal IT operations and initiatives are contractor staff. The other 40 percent are in-house staff. Given staffing constraints and market conditions, we have found this arrangement to work very well. We focus our training of in-house staff on project management, contract management, and technical training to ensure sound project management and oversight of the contractors. Using contractor resources has given us the ability to quickly bring on staff with the IT skills needed to carry out new projects/initiatives.
- Transitioning from a traditional classroom training approach to one that combines and balances classroom training with various online learning experiences that can be delivered at the desktop. To support this approach

to learning, GAO plans to acquire a system that will maintain on-line individual development plans supported by competency-based learning paths and to support the development and delivery of Web-based learning with on-line testing and on-line course evaluations.

- Using the authority that the Congress provided in our 2000 legislation to create Senior Level positions to meet certain scientific, technical, and professional needs and to extend to those positions the rights and benefits of SES employees. One of the areas targeted was IT. We recently named four new Senior Level technical IT positions, and provided a few other specialists—such as our Chief Statistician and Chief Accountant—with new titles and SES-equivalent benefits.

The authority to create Senior Level positions in certain critical areas reflects a specific need we identified and to which the Congress responded. As we assessed GAO's human capital challenges at the start of the new century—including those related specifically to the IT area—we recognized that our preexisting personnel authorities would not let us address these challenges effectively. Therefore, using comprehensive workforce data that we had gathered and analyzed to make a coherent business case, we worked with the Congress last year to obtain several narrowly tailored flexibilities to help us reshape our workforce and establish the Senior Level technical positions.

Along with the Senior Level positions, the legislation gave us additional tools to realign GAO's workforce in light of overall budgetary constraints and mission needs; to correct skills imbalances; and to reduce high-grade, managerial, or supervisory positions without reducing the overall number of GAO employees. To address any or all of these three situations, we now have authority to offer voluntary early retirement (VER) to a maximum of 10 percent of our employees each fiscal year until December 31, 2003. We also have the authority to offer voluntary separation incentive (VSI) payments to a maximum of 5 percent of our employees during each fiscal year until December 31, 2003. Further, in the case of a reduction-in-force (RIF), we have the authority to place a much greater emphasis in our decisionmaking on our employees' knowledge, skills, and performance, while retaining veterans' preference and length of service as factors to consider in connection with applicable RIFs.

Since the legislation was enacted, we have established agency regulations for implementing the VER program. Having analyzed GAO workforce data, we recently began offering voluntary early retirements to take effect from

October 1, 2001 until January 3, 2002. We have largely limited our voluntary early retirement offers to organizational areas in which we do not expect to grow, while at the same time stepping up our efforts to recruit and retain employees in critical occupations such as those related to information technology.

The development of agency regulations to cover VSIs and RIFs is still in progress. We have no plans to offer VSIs, nor do we intend to pursue any involuntary layoffs during this or the next fiscal year.

We believe that three of the authorities provided in our 2000 legislation may have broader applicability for other agencies and are worth congressional consideration at this time. Authority to offer voluntary early retirement and voluntary separation incentives could give agencies additional flexibilities with which to realign their workforces; correct skills imbalances; and reduce high-grade, managerial, or supervisory positions without reducing their overall number of employees. Further, the authority to establish Senior Level positions could help agencies become more competitive in the job market, particularly in critical scientific, technical, or professional areas.

Further Legislative Reforms Should Be Explored

Further, the Administration and the Congress should consider other legislative actions that would help federal employers address their human capital challenges. As demographics change, as the marketplace continues to evolve, we will continue to think strategically and proactively to identify areas in which new innovations would make good business sense. In this regard, we believe it is worth exploring selective legislative proposals to enhance the federal government's ability to attract, retain, and motivate skilled employees, particularly in connection with critical occupations, on a governmentwide basis. In addition to the three items I just mentioned, the following represent areas in which opportunities exist to better equip federal employers to meet their human capital needs:

- *Critical occupations.* Although agencies generally have more hiring and pay flexibilities today than in the past, further innovations might be explored to help federal agencies recruit, retain, and reward employees in such critical fields as information technology, where there is severe competition with other sectors for talent.
- *Recruiting funds.* In order to help attract and retain employees, consideration should be given to authorizing agencies to use appropriated funds for selective recruiting, recognition, and team building activities.

- *Professional development.* To encourage federal employees in their professional development efforts, consideration should be given to authorizing agencies to use appropriated funds to pay for selected professional certifications, licensing, and professional association costs.
- *Pay compression relief.* Executive compensation is a serious challenge for federal agencies, which to an increasing extent must compete with other governmental organizations—and with not-for-profit and private sector organizations—to attract and retain executive talent. In this regard, the existing cap on SES pay has increased pay compression between the maximum and lower SES pay levels, resulting in an increasing number of federal executives at different levels of responsibility receiving identical salaries. Further, pay compression can create situations in which the difference between executive and nonexecutive pay is so small that the financial incentive for managers to apply for positions of greater responsibility may disappear. The Congress needs to address this increasing pay compression problem. It could do so, perhaps, by delinking federal executive compensation from congressional pay, or by raising the cap on executive performance bonuses.
- *Cafeteria benefits.* Federal employees could be provided with flexible benefits available to many private sector workers under Section 125 of the Internal Revenue Service Code. This would give federal employees the ability to pay for such things as childcare or eldercare with pre-tax rather than after-tax dollars.
- *Frequent flyer miles.* Employees who travel on government business should be allowed to keep their "frequent flyer" miles—a small benefit but one that private sector employers commonly provide their people as part of a mosaic of competitive employee benefits. Let's face it, flying is not fun anymore. Allowing federal workers to keep these miles, as employees elsewhere can, is a small price to pay. In addition, federal agencies could still use gainsharing programs to reward employees and save the government travel costs. As you know, Mr. Chairman, there has already been some meaningful progress on this issue: Last week, the House Government Reform Committee approved a bill that would allow civil service employees to "retain for personal use promotional items received as a result of travel taken in the course of employment."
- *Phased retirement.* It may be prudent to address some of the succession planning issues associated with the rise in retirement eligibilities by pursuing phased retirement approaches, whereby federal employees with needed skills could change from full-time to part-time employment and receive a portion of their federal pension while still earning pension credits.

- *Fellowships.* The Congress should explore greater flexibilities to allow federal agencies to enhance their skills mix by leveraging the expertise of private and not-for-profit sector employees through innovative fellowship programs, particularly in critical occupations. Through such fellowships, private and not-for-profit professionals could gain federal experience without fully disassociating themselves from their positions, while federal agencies could gain from the knowledge and expertise that these professionals would bring during their participation in the program. Obviously, appropriate steps would have to be taken to address any potential conflicts. This concept could also be used to allow federal workers to participate in fellowship programs with private and not-for-profit sector employers.

Acquisition Workforce Challenges Hinder Government's Ability To Oversee Outside Contractors

The federal government spends about of $200 billion a year contracting for goods and services. We are concerned with having the right people with the right skills to successfully manage federal contracts. We all agree that dealing with this issue will not be easy. The government is facing ever-growing public demands for better and more economical delivery of products and services. At the same time, the ongoing technological revolution requires a workforce with new knowledge, skills, and abilities. And at the moment, agencies must address these challenges in an economy that makes it difficult to compete for people with the competencies needed to achieve and maintain high performance. This situation is aptly illustrated by the problems found in the growing area of acquiring services.

Federal agencies spend billions of tax dollars each year to buy services ranging from clerical support and consulting services to information technology services, such as network support, to the management and operation of government facilities, such as national laboratories. Our work continues to show that some service procurements are not being done efficiently, putting taxpayer dollars at risk. In particular, agencies are not clearly defining their requirements, fully considering alternative solutions, performing vigorous price analyses, or adequately overseeing contractor performance. Further, it is becoming increasingly evident that agencies are at risk of not having enough of the right people with the right skills to manage service procurements. Consequently, a key question we face in the federal government is whether we have today, or will have tomorrow, the ability to acquire and manage the procurement of increasingly sophisticated services the government needs.

The amount being spent on services is growing substantially. Last year alone, the federal government acquired more than $87 billion in services—a 24-percent increase in real terms from fiscal year 1990. In fact, government purchase of services now accounts for 43 percent of all federal contracting expenses—surpassing supplies and equipment as the largest component of federal contract spending. Another dimension to this issue is that federal agencies are increasingly contracting out for information technology services.

The growth in service contracting has largely been driven by the government's increased purchases of two types of services:

- information technology services, which increased from $3.7 billion in fiscal year 1990 to about $13.4 billion in fiscal year 2000, and
- professional, administrative, and management support services, which rose from $12.3 billion in fiscal year 1990 to $21.1 billion in fiscal year 2000.

The increase in the use of service contracts coincided with a 21-percent decrease in the federal workforce,[19] which fell from about 2.25 million employees as of September 1990 to 1.78 million employees as of September 2000.

As federal spending and employment patterns were changing, changes were also occurring in the way that federal agencies buy services. Specifically, there has been a trend toward agencies purchasing professional services using contracts awarded and managed by other agencies. For example, in 1996, the General Services Administration (GSA) began offering information technology services under its Federal Supply Schedule program,[20] and it now offers services ranging from professional engineering to laboratory testing and analysis to temporary clerical and professional support services. The use of the schedule program to acquire services has increased significantly over the past several years.

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[19] This decrease reflects the total civilian employment for executive branch agencies, excluding the U.S. Postal Service and the Postal Rate Commission.

[20] Under the schedule program, GSA negotiates contracts with vendors for a wide variety of mostly commercial-type products and services, and permits other agencies to place orders under these contracts directly with the vendors. Traditionally, the program had generally been used for common goods, such as office supplies and furniture. According to GSA, it takes 268 days to award a contract using traditional methods, but it takes only 15 days, on average, to award an order under the schedule program.

Other governmentwide contracts have also come into use in recent years. The Federal Acquisition Streamlining Act of 1994 authorized federal agencies to enter into multiple-award, task- and delivery-order contracts for goods and services. These contracts provide agencies with a great deal of flexibility in buying goods or services while minimizing the burden on government contracting personnel to negotiate and administer contracts. The Clinger-Cohen Act of 1996 authorized the use of multiagency contracts and what have become known as governmentwide agency contracts to facilitate purchases of information technology-related products and services such as network maintenance and technical support, systems engineering, and integration services.

While we have seen the environment change considerably, what we have not seen is a significant improvement in federal agencies' management of service contracts. Simply stated, the poor management of service contracts undermines the government's ability to obtain good value for the money spent. This contributed to our decision to designate contract management a high-risk area for the Departments of Defense and Energy, the two largest purchasers within the federal government. Improving contract management is also among the management challenges faced by other agencies.

Compounding these problems are the agencies' past inattention to strategic human capital management. As I noted earlier, we are concerned that federal agencies' human capital problems are eroding the ability of many agencies—and threatening the ability of others—to perform their missions economically, efficiently, and effectively. For example, we found that the initial rounds of downsizing were set in motion without considering the longer-term effects on agencies' performance capacity. Additionally, a number of individual agencies drastically reduced or froze their hiring efforts for extended periods. Consequently, following a decade of downsizing and curtailed investments in human capital, federal agencies currently face skills, knowledge, and experience imbalances that, without corrective action, will worsen, especially in light of the numbers of federal civilian workers becoming eligible to retire in the coming years.

I would like to use DOD's experience to illustrate this problem. As we recently testified,[21] DOD's approach to civilian workforce reduction was not oriented toward shaping the makeup of the force. Rather, DOD relied primarily on voluntary turnover and retirements, freezes on hiring authority, and its authority to offer early retirements and "buy-outs" to achieve reductions. While DOD had these kinds of tools available to manage its civilian downsizing and to mitigate the adverse effects of force reductions, its approach to civilian force reductions was not really oriented toward shaping the workforce for the future. In contrast, DOD did a much better job managing active-duty military force reductions because it followed a policy of trying to achieve and maintain a degree of balance between its accessions and losses in order to shape its forces with regard to rank, specialties, and years of service.[22] As a result, DOD's current civilian workforce is not balanced and therefore poses risks to the orderly transfer of institutional knowledge. According to DOD's Acquisition 2005 Task Force, "After 11 consecutive years of downsizing, we [DOD] face serious imbalances in the skills and experience of our highly talented and specialized civilian workforce," putting DOD on the verge of a retirement-driven talent drain.[23]

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[21] *Human Capital: Major Human Capital Challenges at the Departments of Defense and State* (GAO-01-565T, Mar. 29, 2001).

DOD's leadership had anticipated that using streamlined acquisition procedures would improve the efficiency of contracting operations and help offset the effects of workforce downsizing. However, the DOD Inspector General reported that the efficiency gains from using streamlined procedures had not kept pace with acquisition workforce reductions. The Inspector General reported that while the workforce had been reduced by half, DOD's contracting workload had increased by about 12 percent[24] and that senior personnel at 14 acquisition organizations believed that workforce reductions had led to problems such as less contractor oversight.

While I have discussed DOD's problems at length, we believe our concerns are equally valid regarding the broader civilian agency contracting community. For example, our analysis of personnel data maintained by

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[22] *Human Capital: Strategic Approach Should Guide DOD Civilian Workforce Management* (GAO/T-GGD/NSIAD-00-120, Mar. 9, 2000).

[23] *Shaping the Civilian Acquisition Workforce of the Future*, Final Report of the Acquisition 2005 Task Force to the Under Secretary of Defense, Acquisition, Technology, and Logistics and the Under Secretary of Defense, Personnel and Readiness (October 2000).

[24] *DOD Acquisition Workforce Reduction Trends and Impacts*, Office of the Inspector General, Department of Defense (Feb. 29, 2000).

OPM shows that while DOD downsized its workforce to a greater extent than the other agencies during the 1990s, both DOD and the other agencies will have about 27 percent of their current contracting officers eligible to retire through the end of fiscal year 2005. Consequently, without appropriate workforce planning, federal agencies could lose a significant portion of their contracting knowledge base.

Summary

As we underscored through our January 2001 designation of strategic human capital management as a governmentwide high-risk area, the federal government is facing pervasive human capital challenges. These challenges are eroding the ability of many agencies—and threatening the ability of others—to economically, efficiently, and effectively perform their missions. Many parties will need to work to address the government's human capital problems, including the President, department and agency leaders, OMB, OPM, the Congress, the private sector, foundations and academia, and even the press.

We believe that fundamental human capital legislative reform will eventually become a reality. However, agencies must first take the steps available to them under current laws and regulations to better manage their people. Second, agencies and the Congress alike should explore several legislative opportunities to help attract, motivate, and retain employees, both overall and especially in connection with critical occupations such as those in the information technology area. Finally, all interested parties should work together to determine the nature and extent of more comprehensive human capital (or civil service) reforms that should be enacted over time. These reforms should include placing greater emphasis on skills, knowledge, and performance in connection with federal employment and compensation decisions.

Human capital issues have particular bearing on the information technology area. How successfully the federal government acquires and uses information technology will continue to hinge on its ability to build, prepare and manage its information technology workforce. Agencies must overcome two basic challenges related to IT human capital: a shortage of skilled workers and the need to provide a broad range of related staff training and development. These challenges must be addressed so that federal managers and staff can effectively operate and maintain government systems, adequately oversee related contractor support, and deliver responsive service to the public.

Contact and Acknowledgments

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Attachment I: GAO's Human Capital Framework

Strategic Planning: Establish the agency's mission, vision for the future, core values, goals and objectives, and strategies.

Shared vision
Human capital focus

Organizational Alignment: Integrate human capital strategies with the agency's core business practices.

Improving workforce planning
Integrating the "HR" function

Leadership: Foster a committed leadership team and provide for reasonable continuity through succession planning.

Defining leadership
Building teamwork and communications
Ensuring continuity

Talent: Recruit, hire, develop, and retain employees with the skills needed for mission accomplishment.

Recruiting and hiring
Training and professional development
Workforce deployment
Compensation
Employee-friendly workplace

Performance Culture: Empower and motivate employees while ensuring accountability and fairness in the workplace.

Performance management
Performance incentives
Continuous learning and improvement
Managers and supervisors
Job processes, tools, and mission support
Information technology
Inclusiveness
Employee and labor relations

Source: Human Capital: A Self-Assessment Checklist for Agency Leaders (GAO/OCG-00-14G, September 2000).

Attachment II: Examples of Federal Agencies with Human Capital Challenges

Agency	Illustrative human capital challenges
Agriculture	Organizational culture problems, including resistance from affected USDA agencies and employees, have hampered departmentwide reorganization and modernization efforts. Further, the nation's food safety system, in which USDA plays a major role, continues to suffer from inconsistent oversight, poor coordination, and inefficient deployment of resources.
Bureau of Indian Affairs	Untrained and inexperienced staff hamper effective management of $3 billion in Indian trust funds.
Commerce	A lack of sufficient numbers of experienced staff with the right expertise limits the ability of Commerce and two other trade agencies to monitor and enforce trade agreements.
Defense	In the past two years, the military services have struggled to meet recruiting goals. Attrition among first-time enlistees has reached an all-time high. The services face shortages among junior officers, and problems in retaining a range of uniformed personnel, including intelligence analysts, computer programmers, and pilots. On the civilian side, skills and experience imbalances following downsizing are jeopardizing acquisitions and logistics capabilities.
Energy	Headquarters and field staff have lacked contract management skills to oversee large projects, such as the cleanup of radioactive and hazardous waste sites.
Environmental Protection Agency	EPA has not yet implemented any systematic means of determining the right size, skills needs, or deployment of its workforce to carry out its mission and achieve its strategic goals and objectives, despite the demand for new skills due to technological changes and the shift in EPA's regional environmental responsibilities to the states, as well as growing retirement eligibilities in its workforce.
Federal Aviation Administration	In major acquisition projects, FAA has lacked technical expertise to address vital project issues.

Agency	Human capital challenges
Centers for Medicare and Medicaid Services	Medicare's leadership problems include the lack of any official whose sole responsibility it is to run the program. Further, frequent leadership changes at CMS have hampered long-term Medicare initiatives and the pursuit of a consistent management strategy. CMS' workforce lacks skills needed to meet recent legislative requirements. The mismatch between CMS' administrative capacity and its mandate could leave Medicare unprepared to handle future population growth and medical technology advances.
Housing and Urban Development	As HUD's reorganization moves into its final phases, workload imbalances pose programmatic challenges to several specialty centers and field offices. Single family mortgage insurance programs administered by HUD's Federal Housing Administration have been marked by a number of human capital challenges, including insufficient staff. Further, insufficient or inexperienced staff led to problems in quality assurance reviews for 203(k) home rehabilitation loans and oversight of appraisers and mortgage lenders.
Immigration and Naturalization Service	Lack of staff to perform intelligence functions and unclear guidance for retrieving and analyzing information hamper efforts to combat the growing problem of alien smuggling.
Interior and U.S. Forest Service	Difficulties replacing experienced fire personnel threaten firefighting capabilities during catastrophic events.
Internal Revenue Service	IRS lacks reliable cost and operational information to measure the effectiveness of its tax collection and enforcement programs and to judge whether it is appropriately allocating its staff resources among competing management priorities.
National Aeronautics and Space Administration	Staff and skills losses following downsizing pose potentially serious problems for the safety and planned flight rate of the space shuttle.
National Park Service	Historically, the Park Service's decentralized priority-setting and accountability systems left it without the means to monitor progress toward achieving its goals or hold park managers accountable for the results of park operations. The park concessions program continues to face management problems, including inadequate qualifications and training of the agency's concession specialists and concessions contracting staff. Insufficient fire safety training has contributed to fire safety risks at visitor centers, hotels, and other national park buildings.

Agency	Human capital challenges
Nuclear Regulatory Commission	NRC's organizational culture is struggling with the agency's new "risk-informed" regulatory approach. Further, NRC's ability to maintain the skills needed to achieve its mission and fill the gaps created by growing retirement eligibilities could be threatened by the decline in university enrollments in nuclear engineering and other fields related to nuclear safety.
Pension Benefit Guaranty Corporation	Because the agency did not adequately link its contracting decisions to long-term strategic planning, it may not have the cost-effective mix of contractor and federal employees needed to meet future workload challenges. Further, PBGC employees who monitor contractors lack adequate guidance and policies essential to monitoring contractor performance.
Social Security Administration	Increasing demand for services, imminent retirement of a large part of its workforce, changing customer expectations, and mixed success in past technology investments will challenge SSA's ability to meet its service delivery demands, which include faster and more accurate benefit claims determinations and increased emphasis on returning the disabled to work.
State	Issues related to the quality of life at overseas posts, career development opportunities, and talent management are hampering recruitment and retention of Foreign Service Officers. Efforts to determine the right size and composition of overseas posts have begun, but State faces challenges in aligning its workforce with new economic, political, security, and technological requirements. Also, staffing shortfalls are hampering counternarcotics programs and efforts to combat visa fraud.
US Agency for International Development	Staffing shortfalls in the procurement area have hampered the agency's ability to initiate and monitor contracts, thus delaying reconstruction assistance in the wake of natural disasters in Central America and the Caribbean.
Veterans Affairs	A national nursing shortage could adversely affect VA's efforts to improve patient safety in VA facilities and put veterans at risk. Further, VA's training and recruitment programs may not be adequate to ensure a sufficient workforce of competent claims processors, which would likely undermine efforts to improve current problems of claims processing backlogs and errors.

Source: GAO's Performance and Accountability Series, numbered GAO-01-241 to 262, January 2001.

Attachment III: Addressing the Human Capital Challenge: Shared Responsibilities

- **President**
    - Lead
    - Promote
    - Recognize
- **OMB**
    - Lead
    - Coordinate
    - Link
- **OPM**
    - Lead
    - Advise/Assist
    - Review
- **Departments/ Agencies**
    - Lead
    - Design
    - Implement
- **Congress**
    - Confirm
    - Oversee
    - Legislate
- **GAO**
    - Review
    - Recommend
    - Share
- **Private Sector**
    - Partner
    - Recognize
    - Support
- **Foundations**
    - Partner
    - Research
    - Integrate
- **Academia**
    - Partner
    - Revise
    - Promote
- **Media**
    - Learn
    - Investigate
    - Report

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Mr. TOM DAVIS OF VIRGINIA. Thank you very much. Ms. James.

Ms. JAMES. Thank you, Mr. Chairman. I appreciate the opportunity to testify before you today, and in your invitation you indicated that there were four topics or questions that you'd like for me to address, and I will try to summarize each of them briefly. And also, for the record, I have a longer statement that I would like to submit.

First, I was asked to address OMB's work force analysis order. As you know, the Office of Management and Budget recently asked all agencies to complete a comprehensive assessment of their current and future work force needs. I have not had the opportunity yet to review all of the agencies' submissions or to analyze them, but I do know that OPM worked very hard last year to bring attention to the importance of work force planning.

Also, this year, we made a five-step work force planning model and an information Web site available for all agencies to use. OPM provided data and technical advice that helped agencies carry out their assessments.

I share your concern about the impact of the technology worker shortage and the government's ability to deliver services to the public. Although we are still able to rise to extraordinary challenges like the Y2K crisis, the government, like virtually all our employers, is facing a shortage of qualified workers in the information technology field. It stands to reason that difficulty in maintaining a high quality IT work force would affect agency missions.

We need creative strategies to address this challenge and we know, for instance, that even though pay is not always competitive with the private sector, it's not the only barrier to hiring and keeping a highly qualified IT work force. Outstanding technology workers also seek the chance to work on very challenging problems as well as training opportunities and work place flexibility. We at OPM are working with agencies to improve recruitment strategies and marketing of Federal IT employment opportunities.

What are OPM's proposed solutions? We've been exploring both legislative and administrative remedies to these problems. We have been considering proposals to enhance recruitment and retention incentives for the Federal work force generally. For instance, we've been considering ways to make the current authorities for recruitment relocation and retention incentive payments more flexible and easier for agencies to use in a very targeted way.

Meanwhile, we've already taken other concrete administrative systems to alleviate these recruitment and retention problems. First, we have established special salary rates for entry level and developmental level information technology employees under the general schedule. The new rates will be more competitive for recruiting the talent we so desperately need.

Second, we have issued a new classification standard for IT specialist positions. The standard which our customers are using enthusiastically reflect new and emerging technologies and identifies 10 new specialty areas. We've designed the standard to be a flexible document that we can adapt as new specialties and technologies emerge.

Third, we piloted a new approach to assessing qualifications for IT work. The new model is much more flexible than the old standard and will greatly assist managers in developing vacancy announcements and selection criteria for any IT position. The pilot project has the added advantage of allowing agencies to bring in applicants at whatever grade levels match their competencies, regardless of how much experience they have.

Finally, you asked me about OPM's view on a government-private sector employee exchange program for information technology workers. Like you, Mr. Chairman, I find the concept interesting and attractive. OPM has explored the idea in the past although not exclusively for the IT work force. I know that you just introduced a bill that would establish an exchange program for technology workers, and I look forward to reviewing your proposal.

I understand that there are ethics implications to some specific approaches that need to be explored very carefully and thoroughly. We would defer to the Office of Government Ethics and the Department of Justice on those matters. At the same time, we are eager to work with interested parties to design an effective exchange program that would help strengthen not only our technology work force, but the Federal work force generally. Improving communication and cooperation between the Federal Government and the private sector can help identify new, more effective ways for government and industry to work together. I am particularly interested in ways in which an exchange program might create opportunities to improve customer service and business practices in the government.

I look forward to working with you, Mr. Chairman, to explore ways to make this interesting concept workable. Thank you.

[The prepared statement of Ms. James follows:]

STATEMENT OF
KAY COLES JAMES
DIRECTOR, OFFICE OF PERSONNEL MANAGEMENT

before the

SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY
COMMITTEE ON GOVERNMENT REFORM
U.S. HOUSE OF REPRESENTATIVES

on

THE FEDERAL TECHNOLOGY WORKFORCE

JULY 31, 2001

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

THANK YOU FOR INVITING ME TO THIS HEARING TO DISCUSS WITH YOU THE CHALLENGES FACING THE FEDERAL GOVERNMENT IN RECRUITING AND RETAINING A HIGH QUALITY INFORMATION TECHNOLOGY ("I.T.") WORKFORCE. THE OFFICE OF PERSONNEL MANAGEMENT HAS BEEN URGENTLY SEEKING SOLUTIONS TO THE SHORTAGE OF TECHNOLOGY WORKERS AND WILL CONTINUE TO DO SO UNDER MY LEADERSHIP.

OMB'S WORKFORCE ANALYSIS ORDER

AS YOU KNOW, THE OFFICE OF MANAGEMENT AND BUDGET RECENTLY ASKED ALL AGENCIES TO COMPLETE A COMPREHENSIVE ASSESSMENT OF THEIR CURRENT AND FUTURE WORKFORCE NEEDS. WE LOOK FORWARD TO SEEING THE RESULTS OF THE AGENCIES' ANALYSES.

OPM TOOK ACTION IN 2000 TO BRING ATTENTION TO THE IMPORTANCE OF WORKFORCE PLANNING, AND IN 2001 TO MAKE A WORKFORCE PLANNING MODEL AND INFORMATION WEBSITE AVAILABLE FOR USE BY ALL AGENCIES. OPM'S 5-STEP MODEL, WHICH WAS DEVELOPED WITH THE HELP OF THE HUMAN RESOURCES MANAGEMENT COUNCIL, AND IS BUILT ON BEST PRACTICES FROM THE PRIVATE SECTOR, HELPS LINK AGENCIES' HUMAN CAPITAL PLANNING WITH THEIR STRATEGIC PLANS.

OPM ALSO PROVIDED DIRECT TECHNICAL ASSISTANCE TO OMB AND TO AGENCIES. OPM PARTICIPATED IN THE GOVERNMENT-WIDE BRIEFINGS CONDUCTED BY OMB AND PROVIDED DATA AND TECHNICAL ADVICE THAT AGENCIES NEEDED TO CARRY OUT THEIR ASSESSMENTS.

IMPACT OF TECHNOLOGY WORKER SHORTAGE ON DELIVERY OF SERVICES

THE GOVERNMENT'S EFFECTIVE RESPONSE TO THE "Y2K" CRISIS SHOWS THAT OUR INFORMATION TECHNOLOGY WORKFORCE CAN RISE TO MEET EXTRAORDINARY CHALLENGES. LIKE VIRTUALLY ALL OTHER EMPLOYERS, THOUGH, THE FEDERAL GOVERNMENT IS EXPERIENCING A SHORTAGE OF QUALIFIED WORKERS IN THE FIELD OF INFORMATION TECHNOLOGY. ALTHOUGH THE CHIEF INFORMATION OFFICERS COUNCIL MAY BE ABLE TO PROVIDE MORE SPECIFIC INFORMATION ABOUT THE IMPACT OF THIS SHORTAGE

ON AGENCIES' ABILITY TO ACCOMPLISH THEIR GOALS, IT STANDS TO REASON THAT DIFFICULTY IN MAINTAINING A HIGH-QUALITY "I.T." WORKFORCE WOULD AFFECT AGENCY MISSIONS. INFORMATION TECHNOLOGY IS CRITICAL TO WORKFORCE RECRUITMENT GENERALLY, TO INTERNAL MANAGEMENT PROCESSES, AND TO DELIVERY OF SERVICES TO THE PUBLIC.

WE NEED CREATIVE STRATEGIES TO ADDRESS THIS CHALLENGE. WE KNOW, FOR INSTANCE, THAT WHILE PAY MAY NOT BE COMPETITIVE WITH THE PRIVATE SECTOR AT TIMES, IT IS NOT THE ONLY BARRIER TO HIRING AND KEEPING A HIGHLY QUALIFIED "I.T." WORKFORCE. OUTSTANDING TECHNOLOGY WORKERS ALSO SEEK OPPORTUNITIES TO WORK ON VERY CHALLENGING PROBLEMS, AND THEY CAN CERTAINLY FIND THESE IN THE GOVERNMENT. TRAINING OPPORTUNITIES AND WORKPLACE FLEXIBILITIES ARE OTHER IMPORTANT FACTORS. MANY AGENCIES OFFER FLEXIBLE WORK SCHEDULES AND TELECOMMUTING OPTIONS. WE AT OPM ARE WORKING WITH AGENCIES TO IMPROVE RECRUITMENT STRATEGIES AND MARKETING OF FEDERAL "I.T." EMPLOYMENT OPPORTUNITIES.

OPM'S PROPOSED SOLUTIONS

WE HAVE BEEN EXPLORING BOTH LEGISLATIVE AND ADMINISTRATIVE REMEDIES TO THESE PROBLEMS. WE ARE CURRENTLY CONSIDERING PROPOSALS TO MAKE THE CURRENT AUTHORITIES FOR RECRUITMENT, RELOCATION, AND RETENTION INCENTIVE PAYMENTS MORE FLEXIBLE AND EASIER FOR AGENCIES TO USE IN A VERY TARGETED WAY. THE PROPOSALS WE ARE CONSIDERING INCLUDE AUTHORITY TO PAY FOR ACADEMIC DEGREES AND PROFESSIONAL CREDENTIALS IN CERTAIN CIRCUMSTANCES.

WE HAVE ALSO TAKEN OTHER CONCRETE ADMINISTRATIVE STEPS TO ALLEVIATE THESE PROBLEMS. OUR PRINCIPAL EFFORTS HAVE BEEN THREEFOLD:

- FIRST, WE HAVE ESTABLISHED SPECIAL SALARY RATES FOR "I.T." SPECIALISTS, SCIENTISTS, AND ENGINEERS.

- SECOND, WE HAVE ISSUED A NEW CLASSIFICATION STANDARD FOR "I.T." SPECIALIST POSITIONS, AND

- THIRD, WE HAVE PILOTED A NEW APPROACH TO ESTABLISHING AND ASSESSING QUALIFICATIONS FOR "I.T." WORK.

ALL ALONG THE WAY, OPM HAS WORKED CLOSELY WITH THE LEADERS OF THE "I.T." COMMUNITY–THE FEDERAL CHIEF INFORMATION OFFICERS COUNCIL–AND PARTICULARLY ITS FEDERAL "I.T." WORKFORCE COMMITTEE. UNDER THE LEADERSHIP OF THAT COMMITTEE'S CO-CHAIRS–GLORIA PARKER, CHIEF

INFORMATION OFFICER AT THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND IRA L. HOBBS, ACTING CIO AT THE DEPARTMENT OF AGRICULTURE–WE HAVE MADE SIGNIFICANT PROGRESS.

IN THESE EFFORTS, I AM PLEASED TO SAY THAT OPM ACTED SWIFTLY TO TAKE THE LEAD IN THE DATA GATHERING AND ANALYSIS THAT WAS NEEDED. IN PARTICULAR, WE LED THE INTERAGENCY STUDY THAT PROVIDED THE BASIS FOR ESTABLISHING NEW SPECIAL PAY RATES FOR "I.T." WORKERS. WE USED A SERIES OF FOCUS GROUPS OF SUBJECT-MATTER EXPERTS AND LINE MANAGERS TO CLARIFY AND ESTABLISH THE OCCUPATIONAL SPECIALTIES THAT PROPERLY DESCRIBE "I.T." WORK AT THE START OF THE 21ST CENTURY. THESE EFFORTS PRODUCED REAL RESULTS FOR "I.T." MANAGERS THROUGHOUT GOVERNMENT.

SPECIAL PAY RATES FOR "I.T." WORKERS

THE LAW ALLOWS OPM TO ESTABLISH HIGHER RATES OF PAY FOR GROUPS OF EMPLOYEES IF AGENCIES ARE EXPERIENCING SIGNIFICANT HANDICAPS IN RECRUITING OR RETAINING THOSE EMPLOYEES. BASED ON DATA WE GATHERED FROM AGENCIES, WE DETERMINED THAT THE MOST SEVERE "I.T." STAFFING PROBLEMS WERE OCCURRING AT THE LOWER, ENTRY-LEVEL GRADES. AGENCIES REPORTED DIFFICULTY RECRUITING AT THESE LEVELS BECAUSE CURRENT GENERAL SCHEDULE SALARIES WERE NOT COMPETITIVE. ALSO, WE FOUND THAT TURNOVER RATES WERE MORE SEVERE AT ENTRY-LEVEL GRADES

THAN AT HIGHER GRADES.

BASED ON THIS INFORMATION, OPM ESTABLISHED HIGHER RATES OF BASIC PAY, OR SPECIAL RATES, BEGINNING IN JANUARY OF THIS YEAR, FOR ENTRY-LEVEL AND DEVELOPMENTAL-LEVEL INFORMATION TECHNOLOGY EMPLOYEES UNDER THE GENERAL SCHEDULE. THESE SPECIAL RATES PROVIDED PAY INCREASES TO COMPUTER SPECIALISTS, COMPUTER ENGINEERS, AND COMPUTER SCIENTISTS AT GRADES GS-5, 7, 9, 11, AND 12. THE NEW RATES WILL BE MORE COMPETITIVE FOR RECRUITING THE TALENT WE NEED.

NEW CLASSIFICATION STANDARD FOR "I.T." SPECIALISTS

IN JUNE OF THIS YEAR, OPM ISSUED A NEW CLASSIFICATION STANDARD FOR INFORMATION TECHNOLOGY MANAGEMENT POSITIONS, AFTER DEVELOPING AND TESTING IT IN COOPERATION WITH THE CIO COUNCIL'S WORKFORCE COMMITTEE AND THE HUMAN RESOURCES MANAGEMENT COMMUNITY. ONCE AGAIN, LONG HOURS OF HARD WORK WITH SUBJECT-MATTER SPECIALISTS PRODUCED A RESULT THAT OUR CUSTOMERS ARE USING ENTHUSIASTICALLY. THE NEW STANDARD EXPANDS THE LEGACY WORLD OF MAINFRAME COMPUTERS TO RECOGNIZE THE CONTEMPORARY REALITIES OF NETWORKING, THE INTERNET, AND COMPUTER SECURITY NEEDS. THE STANDARD REFLECTS NEW AND EMERGING TECHNOLOGIES AND IDENTIFIES TEN NEW SPECIALTY AREAS. WE HAVE DESIGNED THE STANDARD TO BE A FLEXIBLE DOCUMENT

THAT WE CAN ADAPT AS NEW SPECIALTIES AND TECHNOLOGIES EMERGE.

NEW PILOT PROJECT TO ASSESS QUALIFICATIONS OF "I.T." CANDIDATES

OPM HAS IDENTIFIED THE CRITICAL "I.T." COMPETENCIES FOR THE PRESENT AND THE FUTURE, AND HAS ESTABLISHED A NEW COMPETENCY-BASED JOB PROFILE, WHICH IS BEING PILOT-TESTED AS A REPLACEMENT FOR THE EXISTING QUALIFICATION STANDARD. THIS NEW MODEL FOR QUALIFICATION STANDARDS CAPTURES THE FULL RANGE OF GENERAL AND TECHNICAL COMPETENCIES REQUIRED FOR "I.T." OCCUPATIONS FROM THE ENTRY TO THE SENIOR-EXPERT LEVEL. THE NEW MODEL IS MUCH MORE FLEXIBLE THAN THE OLD STANDARD AND WILL GREATLY ASSIST MANAGERS IN DEVELOPING VACANCY ANNOUNCEMENTS AND SELECTION CRITERIA FOR ANY "I.T." POSITION. COMPETENCY-BASED APPROACHES WILL BE MUCH MORE USEFUL TO POTENTIAL APPLICANTS AS WELL, BECAUSE THEY PROVIDE A CLEARER PICTURE OF WHAT A JOB REQUIRES AND HOW SUCCESSFUL PERFORMANCE WILL BE MEASURED.

ANOTHER ADVANTAGE OF THE PILOT PROJECT IS THAT IT ALLOWS AGENCIES TO BRING IN APPLICANTS AT WHATEVER GRADE LEVELS MATCH THEIR COMPETENCIES, REGARDLESS OF HOW MUCH EXPERIENCE THEY HAVE. ALSO, THE COMPETENCY-BASED APPROACH ALLOWS FOR USE OF ACCELERATED PROMOTIONS BASED ON AN INDIVIDUAL'S ABILITY TO ACQUIRE NEW

COMPETENCIES NEEDED AT THE NEXT HIGHER LEVEL.

OTHER "I.T." RECRUITMENT TOOLS

IN ADDITION TO THESE INNOVATIONS, WE RECENTLY ADDED A NEW JOB SEARCH FEATURE TO "USAJOBS," THE FEDERAL GOVERNMENT'S WEB-BASED EMPLOYMENT INFORMATION SYSTEM. THIS FEATURE REACHES OUT TO JOB SEEKERS IN THE PRIVATE SECTOR WHO MAY NOT BE FAMILIAR WITH THE GENERAL SCHEDULE POSITION CLASSIFICATION SYSTEM, AND MAKES IT EASIER FOR THEM TO FIND "I.T." POSITIONS. JOB SEEKERS CAN ALSO ARRANGE TO RECEIVE E-MAIL NOTIFICATION OF ANY VACANCY THAT MEETS THEIR JOB SEARCH CRITERIA. WE HAVE BEEN WORKING CLOSELY WITH PRIVATE SECTOR COMPANIES LAYING OFF "I.T." WORKERS TO LINK THEIR OUTPLACEMENT EFFORTS TO "USAJOBS."

I SHOULD ALSO BRIEFLY MENTION ANOTHER NEW RECRUITMENT TOOL, THE SCHOLARSHIP FOR SERVICE PROGRAM, WHICH PAYS STUDENTS FOR ONE OR TWO YEARS OF UNDERGRADUATE OR GRADUATE EDUCATION IN AN INFORMATION SECURITY ("I.S.") PROGRAM AT AN "I.S." CERTIFIED UNIVERSITY. IN RETURN, THE STUDENTS COMMIT TO ONE OR TWO YEARS OF GOVERNMENT SERVICE AFTER GRADUATION. SIX UNIVERSITIES WERE COMPETITIVELY SELECTED TO PARTICIPATE THIS YEAR, AND THE FIRST SCHOLARSHIPS, FUNDED BY THE NATIONAL SCIENCE FOUNDATION, WILL BE AWARDED FOR THIS FALL.

FINALLY, I WOULD LIKE TO POINT OUT THAT MUCH HAS BEEN SAID ABOUT THE TIME IT TAKES TO HIRE FEDERAL EMPLOYEES. OPM IS CONSIDERING BOTH REGULATORY AND LEGISLATIVE INITIATIVES TO ADDRESS THIS PROBLEM. AT THE SAME TIME, WE ARE REMINDING AGENCIES AND EDUCATING MANAGERS ABOUT THE FLEXIBILITIES THEY ALREADY HAVE, BUT MAY NOT BE USING. THERE ARE A NUMBER OF AGENCIES THAT HAVE SIGNIFICANTLY REDUCED THE TIME IT TAKES TO HIRE A NEW EMPLOYEE, SIMPLY BY IMPROVING THEIR OWN ADMINISTRATIVE PROCESSES. WE ARE SHARING THESE BEST PRACTICES WITH THE FEDERAL HUMAN RESOURCES COMMUNITY.

INFORMATION TECHNOLOGY WORKFORCE EXCHANGE PROGRAM

YOU ALSO ASKED ME ABOUT OPM'S VIEWS ON A GOVERNMENT–PRIVATE SECTOR EMPLOYEE EXCHANGE PROGRAM FOR INFORMATION TECHNOLOGY WORKERS. LIKE YOU, MR. CHAIRMAN, I FIND THE CONCEPT INTERESTING AND ATTRACTIVE. OPM HAS EXPLORED THE IDEA IN THE PAST, ALTHOUGH NOT JUST FOR THE "I.T." WORKFORCE. I KNOW THAT YOU JUST INTRODUCED A BILL THAT WOULD ESTABLISH AN EXCHANGE PROGRAM FOR TECHNOLOGY WORKERS, AND I LOOK FORWARD TO REVIEWING YOUR PROPOSAL.

I UNDERSTAND THAT THERE ARE ETHICS IMPLICATIONS TO SOME SPECIFIC APPROACHES THAT NEED TO BE EXPLORED VERY CAREFULLY AND THOROUGHLY. WE WOULD DEFER TO THE OFFICE OF GOVERNMENT ETHICS

AND THE DEPARTMENT OF JUSTICE ON THOSE MATTERS.

WE WOULD LIKE TO WORK WITH INTERESTED PARTIES TO DESIGN AN EFFECTIVE EXCHANGE PROGRAM THAT WOULD HELP STRENGTHEN NOT ONLY OUR TECHNOLOGY WORKFORCE, BUT THE FEDERAL WORKFORCE GENERALLY. IMPROVING COMMUNICATION AND COOPERATION BETWEEN THE FEDERAL GOVERNMENT AND THE PRIVATE SECTOR CAN HELP IDENTIFY NEW, MORE EFFECTIVE WAYS FOR GOVERNMENT AND INDUSTRY TO WORK TOGETHER. I BELIEVE AN EMPLOYEE EXCHANGE PROGRAM COULD FACILITATE THE FLOW OF FRESH APPROACHES TO TECHNICAL PROBLEM-SOLVING BETWEEN THE TWO SECTORS. I AM PARTICULARLY INTERESTED IN WAYS IN WHICH AN EXCHANGE PROGRAM MIGHT CREATE OPPORTUNITIES TO IMPROVE CUSTOMER SERVICE AND BUSINESS PRACTICES IN THE GOVERNMENT. I LOOK FORWARD TO WORKING WITH YOU, MR. CHAIRMAN, TO EXPLORE WAYS TO MAKE THIS INTERESTING CONCEPT WORKABLE.

ONCE AGAIN, I APPRECIATE THE OPPORTUNITY TO BE WITH YOU THIS MORNING, AND I WOULD BE HAPPY TO ANSWER ANY QUESTIONS YOU MAY HAVE.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much. Mr. Perry.

Mr. PERRY. Chairman Davis, members of the subcommittee, I appreciate having the opportunity to appear before you today to talk about the challenges facing the government in recruiting and retaining information technology associates, and also to discuss the proposed legislation to establish an information technology executive exchange program. With your permission, I'd like to submit my formal testimony on this matter, the written testimony for the record.

Mr. TOM DAVIS OF VIRGINIA. Without objection.

Mr. PERRY. It is certainly the case that IT skills are critical to the performance of every single Federal agency, and that certainly is true at GSA. In recent years at GSA we've undergone dramatic changes in the concept of our operations for purposes of improving our ability to meet our customer agency needs and thereby help them better serve the public and taxpayers. It certainly is the case that as we continue to adapt to the new way of doing business, this will have a continuing effect on the mix of skills and competency needed by GSA associates, and chief among them will be IT skills.

My written testimony submitted for the record provides details with respect to some items that GSA has been involved in in recent times and what we plan to do, so I'll spend my allotted time rather focusing on the specific questions that was in the invitation letter regarding our IT work force.

First, with respect to the question on GSA compliance with OPM's request for work force analysis, that analysis was submitted to OMB on July 6th. We believe that is a very helpful thing and an important part of our work force planning. The next step that we'll take in that process will be a comprehensive review of our existing work force and our future work force needs, and this will be done as a part of refining and clarifying our strategic plan. As part of this work, we will identify the skills and competencies that the GSA IT work force must have in order to achieve our performance goals. This strategic planning work is currently under way.

Regarding the second question, we have reviewed the proposed Information Technology Executive Exchange Act of 2001, a legislative draft, and we support the concept, and we believe that this proposal offers a creative approach to providing the Federal Government with IT professionals from the private sector. The administration looks forward to working with Congress to craft the Work Force Exchange Program that achieves the desired goals on behalf of the government.

The question regarding the impact of technology, as resulting from the work force shortage, I would say that while GSA has to this point been able to stay reasonably on track in terms of delivering programs and accomplishing our goals, the technology work force shortage certainly has created challenges for us in developing and managing our IT systems, challenges also in terms of carrying out any significant new initiatives and challenges in terms of finding the staff with the technical skills and competencies that we need for the future. As a result of this, we have hired contractors to assist us in the support and development of IT systems that we need to accomplish our service and our missions.

You asked also about tools that I might be aware of from the private sector that may impact upon this issue of work force shortage and the issue of better work force planning at GSA. Certainly as you're aware, private sector companies in the United States have used approaches such as developing alliances with universities to attract students, providing internships as an approach, recruiting on a global basis, as opposed to a U.S. basis, use of H1B visas and, in fact, in cases outsourcing technology projects to be done by workers in other countries.

Obviously, not all of these tools would be desirable from a public sector perspective. During the short term the public sector will continue to have difficulty competing with the private sector to attract and retain highly skilled IT workers. Consequently, we will need to aggressively apply the recruitment and retention tools that are discussed in my written statement. We will also need to develop additional creative solutions such as this information technology exchange program.

Better work force planning will be accomplished at GSA by improving our human capital management process and integrating this into our performance management process as is necessary to build the organizational capability that we need to accomplish our mission and goals. In our strategic planning, which we at GSA are calling Creating a Successful Future at GSA, we have identified the need to do this as a part of an initiative to create a world class work force and a world class workplace. This process will buildupon the work that's already in place at GSA and it includes the following steps, which I would mention as being part of best practice, as David Walker has pointed out in many occasions on work force management.

The first step is to have more clearly stated and documented goals with performance accountability measures; second; to define the organizational structure and the specific skills and competencies that we must have in each position within the organization in order to be able to achieve our goals; third, to conduct a comprehensive assessment of our existing organizational structure, our existing skills and competencies and thereby identify the gap between the desired organization and the existing organization that we need to achieve our goals, bridging this gap through succession planning, associate training, associate development, targeted recruitment and targeted retention initiatives. This process will be pursued consistent with the administration's competitive sourcing initiative.

In closing, I want to reemphasize our agency's commitment to work with the subcommittee and other agencies to develop creative solutions to address the information technology work force shortage challenges that we face. We will work with you to identify and implement solutions that will be effective, and will enable us to help our customer agency better serve the public.

Mr. Chairman, this concludes my formal oral statement. I'll be happy to answer questions you may have.

[The prepared statement of Mr. Perry follows:]

STATEMENT OF
STEPHEN A. PERRY

ADMINISTRATOR
OF
GENERAL SERVICES

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY
AND PROCUREMENT POLICY

COMMITTEE ON GOVERNMENT REFORM

U.S. HOUSE OF REPRESENTATIVES

JULY 31, 2001

Chairman Davis, Mr. Turner and Members of the Subcommittee, thank you for inviting me to this hearing. I appreciate the opportunity to appear before you today to discuss the challenges facing government in recruiting and retaining information technology (IT) associates and the proposed legislation to establish an information technology executive exchange program. With your permission, I'd like to submit my formal written testimony for the record.

The General Services Administration (GSA), like other Federal agencies, recognizes the challenges that we face in recruiting and maintaining the talent that is needed to have a world-class workforce. As you know, the significance of this challenge is clearly emphasized by the General Accounting Office (GAO) adding strategic human capital management to their high risk list for 2001.

IT skills are critical to the performance of every Federal agency, and this is certainly true at GSA. In recent years, GSA has undergone dramatic changes in our concept of operations for purposes of improving our ability to meet the needs of our customer agencies and thereby helping them to better serve the public and the taxpayers. As we continue to adapt the way we do business, this will affect the mix of skills and competencies needed by GSA associates. For example, with GSA using E-Commerce for business transactions and looking for more opportunities to expand this use, the need for associates with E-Commerce skills and knowledge will increase. We will take a comprehensive approach to build the need organizational skills and knowledge through a World-Class Workforce and World-Class Workplace initiative that I will discuss in detail later in this statement.

For government, as well as private enterprise, the information technology occupation is one in which the demand clearly exceeds the supply of highly skilled individuals. This is a significant issue for GSA and for the Federal government in general, because today we are more dependent than ever on information technology. Our use of technology has gone from being important to being essential in the performance of our mission

Let me share with you some of what GSA has accomplished and is planning to do. Specifically, I will take some time to outline for you:

- where we are in GSA in terms of the demographics and capabilities of our IT associates;
- current actions at GSA to address the recruitment and retention challenges we are facing;
- what we think the future holds for the IT workforce at GSA; and,
- in this context, specific answers to the questions posed in your invitation to this hearing.

Demographics and Capabilities of GSA IT Associates

Of GSA's over 14,000 associates, 1,167 or 8% are IT associates. To put this in context, our most populous occupation is Contract Specialist at 9% of our workforce. Over the last 5 years, the number of IT associates at GSA has been reduced by 192, or 14%, due to retirements, including buyouts, hiring freezes, and associate's decisions to move to other occupations, other agencies or the private sector. Of our current 1,167 IT associates, 732 are Computer Specialists and 435 are Telecommunications Specialists. Forty-three percent of these associates have degrees: 5 % have associates degrees, 26% have bachelor's degrees, 12% have masters, and less than 1% have doctorate degrees. Sixty-five percent of our IT workforce is at the GS-12 and GS-13 levels. The average age of these IT associates at GSA is 46 years. Forty-four percent of them are between 45-55 years old. By 2005, thirty percent of our IT associates will be eligible to retire. These demographics and our current and future performance requirements highlight the fact that GSA must have an aggressive approach in recruiting and retaining highly skilled IT associates.

Current Actions at GSA to Address Recruitment and Retention Challenges

Attracting and retaining highly skilled IT workers will continue to be a challenge for GSA in the future. Although our current turnover rate has been relatively stable for IT and GSA IT associates indicate general job satisfaction, we know that this could worsen if the IT industry resumes its rapid growth rate. Research from The Working Council for Chief Information Officers finds that "many high potential employees who otherwise classify themselves as satisfied nonetheless express an intention to leave, reaffirming that IT professionals are keenly aware of external job opportunities". Attracting and retaining IT associates in this environment will continue to be a challenge. The study goes on to state that focusing only on satisfaction can provide a false security about an organization's retention profile and as a consequence, dramatically understate the retention risks. It also points out that several other factors weigh heavily for retention. These factors include opportunities to work under superior management leadership, ability to earn a higher base salary, benefits packages for health and retirement benefits and a slight marginal preference for flexible working arrangements.

Although the Federal government may not be able to match salary levels for comparable IT job categories and levels in the private sector, GSA is taking a series of special actions as follows:

1. Quality of work life features to compensate for lower pay, to include:
    - investing in technology infrastructure to provide high-quality electronic workplaces,
    - exposing IT associates to more meaningful work assignments with a greater impact on the organization,
    - investing increasing amounts of budgets into cash awards and recognition of all employees to celebrate our successes
    - providing flexible work arrangements such as alternate work schedules and participation in the GSA Telework Program, and
    - reinforcing positive employee relationships through other programs, such as mentoring.

2. Use of the Industry Specialist hiring authority:

   This authority allows us to foster an exchange of ideas and brings experienced practitioners to the agency. Typically, we have hired Industry Specialists for an initial period of two years with reappointment possible for an additional two years. The Federal Technology Service in GSA has been an aggressive user of this program and has employed approximately 20 Industry Specialists in the IT field.

3. Use of existing Office of Personnel Management (OPM) authorities:

   GSA utilizes authorities such as special salary rates for IT professionals, recruitment bonuses, retention allowances, relocation bonuses, tuition reimbursement and student loan repayment. We are using these authorities in our recruitment of new IT associates and retention of our existing associates.

Let me share some specific examples of our use of these authorities. GSA is being aggressive in identifying opportunities to enhance compensation for IT positions. The special IT salary rates may be helpful in attracting and retaining IT associates in pay grades GS-5 through GS-12. For some IT positions, recruitment bonuses (11 in 1999) allow us to attract more highly skilled IT associates. In balancing this, we are also purposely, but judiciously, using retention allowances (3 in 1999) to retain some of our most highly skilled IT associates. GSA encourages the career-enhancing development of IT associates and supports this improvement in skills and knowledge by providing tuition reimbursement. GSA has also made learning opportunities more available and accessible through the GSA On-Line University that allows associates to take courses from their desktop or home computers 24 hours a day. The majority of the courses currently taken through the GSA On-Line University are IT courses. The most recent OPM authority made available, student loan repayment, will also be used in the future. GSA has been very deliberate in our use of these authorities and although they have helped, we recognize that they are not a panacea.

4. Use of contractors to support GSA IT initiatives:

   GSA has learned how to effectively use contractors to support our major IT initiatives and supplement our workforce in carrying out our mission. Some typical examples of the use of contractors are administration of our wide area network, local area networks, desktop management, major system design and development efforts and the GSA On-Line University. GSA associates typically manage, contract for and oversee the functions performed by the contractors to ensure that our initiatives are accomplished. We plan to continue to use contractors for our major IT initiatives.

5. Being a catalyst for interagency initiatives:

GSA has been supporting the development of IT workers, not only within GSA but also in the wider Federal community. Our work with interagency initiatives will continue.

- Federal IT Workforce Challenge

  In 1998, GSA, OPM, and Treasury initiated the "Federal IT Workforce Challenge". The Federal IT Workforce Challenge effort continues today in the Federal CIO Council.

- Trail Boss

  GSA developed another program called "Trail Boss" to enhance the professional level core competencies in information technology services. This graduate level program resulted in 1,382 graduates.

- 1000 By the Year 2000

  In 1993, GSA developed another graduate level certificate program emphasizing information technology management through offerings at 29 national universities and colleges. This program, "1000 by the Year 2000", had over 1060 participants.

- IRMCO

  GSA annually hosts the Interagency Resources Management Conference (IRMCO). IRMCO is where top government leaders from all agencies, and many state and local organizations, come together to share information, best practices, and solutions pertaining to agency business objectives and outcomes and results in significant knowledge enhancement for all who attend. This September will be the Conference's

40th Anniversary with 450 top government executives and managers attending.

- STAR

  In October 1999 GSA started a program in strategic leadership called the Strategic and Tactical Advocates for Results (STAR) program. STAR develops leaders in the critical strategic thinking and collaborative skills necessary to successfully manage today's agency business. IT associates from many Federal agencies have attended this graduate level residency program and 110 have graduated.

- CIO University

  GSA designed and administers the CIO University started in 1999 which develops leaders in the core competencies that the Federal CIO Council has identified as being the most important to a CIO organization. The CIO University partners with colleges and universities to deliver this program and has had a significant impact on the course offerings that they provide. The CIO University has had 57 graduates.

What We Think the Future Holds for the IT Workforce at GSA

In recent years, the GSA IT workforce has been helping to improve its own operations and the operations of other Federal agencies by leading and or assisting in the development and implementation of major technology initiatives.

This includes initiatives such as the Internet search engine, Firstgov.gov; electronic procurement initiatives such as GSA Advantage; telecommunications initiatives such as FTS 2001 long distance telephone service and MAA local telephone service; and GSA internal applications such as our Pegasys Financial Accounting System. Work on these and many other major technology initiatives must continue in the future as the Federal government moves forward to the realization of using e-government as a tool to achieve citizen-centered, results oriented, market-based government. Given the existing and developing IT skills and competencies of GSA associates, it is clear that the GSA IT workforce will continue to have an important role and responsibility, along with OMB, OPM and other agencies, to achieve the successful development and implementation of these and other technology initiatives in the future.

The "business model" used by GSA to accomplish technology projects is changing significantly and this will have implications for the GSA IT workforce of the future. Historically, GSA's IT workforce was more directly involved in developing and implementing technology systems. Today, and in the future, GSA uses outside contractors to a greater extent as the means to provide the quality of technical skills needed for application development and implementation. GSA IT professionals will set the direction and manage the accomplishment of the work performed by outside contractors. The implication is that GSA's IT workforce will require relatively more broad technology skills and competencies rather than detailed technical expertise in more narrow technology areas. They will also require relatively more business process design, project management and contract management skills and competencies.

The GSA IT workforce of the future will be more precisely defined as we complete the GSA Strategic Plan and integrate our human capital management process into this plan during the coming weeks.

Let me now focus on the answers to your specific questions regarding other issues concerning the IT workforce shortage included in your invitation to this hearing.

GSA Compliance with OMB Request for Workforce Analysis

On July 6, 2001, GSA submitted to the Office of Management and Budget (OMB) an agency-wide Workforce Analysis Report, as requested in OMB Bulletin 01-07, Workforce Planning and Restructuring. This report provides information regarding past changes to the workforce as well as projections for future attrition, recruitment and training needs. We agree with OMB that conducting such an analysis is a good management practice. It will be helpful to our overall effort for improving our human capital management process which will be integrated into our Performance Management Process, as necessary, to provide the organizational capability we need to achieve our mission and goals. The comprehensive assessment of our workforce needs will be done as part of refining and clarifying our Strategic Plan and identifying the skills and competencies that GSA IT workforce must have in order to achieve it. This work is currently underway.

GSA Supports the Concept of IT Workforce Exchange Program

We have reviewed the proposed "Information Technology Executive Exchange Act of 2001" legislative draft. We support this concept and believe that this proposal offers a creative approach to providing the Federal government with IT professionals from the private sector. The Administration looks forward to working with Congress to craft a workforce exchange program that achieves the desired goals in the Federal government.

Impact of the Technology Workforce Shortage on GSA's Ability to Develop Effective Solutions for the Delivery of Services and Accomplishment of Mission

GSA has felt the impact of the technology workforce shortage. While we generally have been able to deliver our programs and accomplish our mission, the shortages have created challenges for us in developing and managing our IT systems, carrying out significant initiatives, and finding staff with the technical skills and competencies needed. As noted earlier, we have hired contractors to assist and support us in developing and delivering effective service and accomplishing our mission. We must have the ability to acquire the right skill set and knowledge level in our mix of in-house and private resources to be able to maintain this effectiveness. This is clearly a huge challenge.

Tools from the Private Sector to Address Technology Workforce Shortages; and Initiatives for Better Workforce Planning at GSA

The technology workforce shortage exists in the private sector as well as the public sector. This situation is projected to continue in both sectors for years to come as a result of the burgeoning employment opportunities in technology fields. In the long-term, this imbalance between supply and demand will be addressed as more and more people get the education and training necessary to enter technology-based fields of employment. In the short-term, however, no complete solution has evolved. Private sector companies in the U.S. have used approaches such as developing alliances with Universities, internships, global recruitment, use of H1B Visas, and outsourcing technology projects to be done by workers in other countries. Obviously, not all of these tools would be desirable from a public sector perspective. During the short-term, the public sector will continue to have difficulty competing with the private sector to attract and retain highly skilled IT workers. Consequently, we will need to aggressively apply the recruitment and retention tools discussed in this statement. We will also need to develop additional creative solutions such as the IT workforce exchange envisioned in the "Information Technology Executive Exchange Act of 2001."

Better workforce planning will be accomplished at GSA by improving our human capital management processes and integrating it into our Performance Management Processes, as necessary, to build the organizational capability we need to accomplish our Mission and Strategic Goals. In our GSA Strategic Planning work called "Creating a Successful Future at GSA" , we have identified the need to do this as part of an initiative to create a World-class Workforce and World-class Workplace. This process will build upon work that is already in place at GSA and includes the following:

1. First, we must take the steps necessary to develop much more clearly stated goals and document them along with performance accountability measures in our Strategic Plan and our Annual Operating Plan.
2. With clear goals in place, we will be able to better define the organizational structure and the specific skills and competencies we must have in each position in order to be capable of achieving these goals.
3. After the desired organization is defined, the next step will be to conduct a comprehensive assessment of existing organizational structure, skills and competencies and identify the "gap" between the desired and the existing organization we need to achieve our goals. This "gap" will be bridged by application of a rigorous human capital management process throughout GSA which will include succession planning, associate training and development, targeted recruitment and targeted retention initiatives. This process will be pursued consistent with the Administration's competitive sourcing initiative.

In closing, I want to emphasize our agency's commitment to work with this Committee and other agencies to develop creative solutions to address the information technology workforce shortage challenges we face. We will work with you to identify and implement solutions that will be effective and will enable us to help our customer agencies better serve the public.

Mr. Chairman, this concludes my formal statement, and I will be glad to answer any questions that you or the Subcommittee members may have.

Mr. TOM DAVIS OF VIRGINIA. Great. Thank you very much. We'll go right to questions. I'll start with Mr. Horn.

Mr. HORN. Thank you very much, Mr. Chairman. The one question I want to raise is—and I'd like—it may be within your document here and I just haven't had a chance to get it. But Ms. James, I am curious about the incentives for management. And I do that based on an experience. Back 35 years, members of the old Civil Service Commission were hired to start what is now the California State University System, the largest in the country. And we changed that when I got in there and in the 1970's and we got a management operation that would go from $10,000 to over $100,000 and it was all based on a contract and a number of things the manager is going to reach in, say, 6 months or 1 year. And we had an absolute turnaround. And they could have the contract, they could see what they had done, hadn't done, so forth.

So I am curious since you—and I am delighted to see you as Director of the Office of Personnel Management. What's your thinking in that area to stimulate management?

Ms. JAMES. Thank you. I am sure that there's much more going on inside OPM right now than I am fully aware of, having been on the job for about 10 working days, so I can't give you a complete answer to that. I will tell you that I think that managers should be given all the appropriate tools in order to manage effectively, which means that they should have the flexibility that they need as a matter of principle to attract and recruit and retain.

What that means in practice is that they have to have the training that's necessary and required, the flexibility, as I mentioned, that would give them the opportunity to manage their agencies in ways that would be productive. There's probably a lot more going on inside OPM that I am not prepared to share with you just yet. I do know that is a principle that we believe in very strongly.

Mr. HORN. Well, I appreciate that.

Mr. Perry, do you have any thoughts on this? You have a huge organization and a lot of talent there. What can we do to stimulate management?

Mr. PERRY. Well, among the things that in addition, along the lines of what Ms. James has said, I would just comment to the need for focus organizationally, and one of the things that brings about the focus is to more clearly define our goals and objectives. Every agency if asked would say, of course we have goals and objectives. But when pressed to say well, what are they, and how detailed are they, how specific are they, I think oftentimes we find that they are not as specific as they might be.

To my mind, one of the things that managers can help themselves with is by making sure that their organization is more focused and then they spend their time obviously on working on having the associates of the organization be strongly aligned and committed to achieving those goals.

Now, things that are done in terms of incentives, compensation and so forth are——

Mr. TOM DAVIS OF VIRGINIA. Mr. Perry, could you pull that microphone a little closer?

Mr. PERRY. I am sorry.

Things that are done in the area of compensation and incentives are very important, as studies have shown. At the same time this issue of having a positive, productive work force is also very energizing and challenging to managers. So I think that's an aspect that I would add to what Ms. James had to say.

Mr. HORN. Comptroller General, you have a different type of personnel system.

Mr. WALKER. We do——

Mr. HORN. Yes.

Mr. WALKER [continuing]. Mr. Horn. But let me comment first on your question. I think one of the things that has to happen in government is that we have to be able to take the strategic plans which are required by GPRA. We need to make them more than an annual paperwork exercise. They need to become the framework for how these do business every day. We need to define key performance indicators. We need to link institutional and individual performance measurement reward systems to those key performance indicators to achieve desired outcomes, and we need to reward people more based upon their skills, knowledge and performance in achieving those outcomes.

We're a long way from that today in the government as a whole. Fortunately, we're a lot closer at GAO. We're a lot closer at GAO because, A, of all the things that we've done administratively in order to put us in a position to be able to do that. And second, as you noted, we do have some additional legislative flexibilities available to us that other agencies do not. However, I think other agencies that don't even have these flexibilities can go a long way toward achieving this linkage within the context of current law if they just get on with it.

Ms. JAMES. Mr. Chairman, there's one thing that I would add to that, and that is that in—one of the things that I think is so vitally important is to, in those linkages, link not only mission goals and objectives in terms of bottom line, but to make sure that our managers today understand that the human capital issue is a strategic issue that should be an important part of the agency's mission and objective. Many times we have to fight to make that a priority for our managers without them understanding that it does have a very important bottom line function in their ability to achieve their mission. And so I think we have to link that to performance as well.

Mr. HORN. Mr. Walker.

Mr. WALKER. One quick followup on that. I totally agree, and one of the things that we've tried to do at GAO is that we've tried to have a so-called balanced scorecard approach from a philosophical standpoint. What we are looking to try to achieve and how we evaluate people is, No. 1, results, desired outcomes. So results are No. 1.

No. 2, client feedback. What do our clients say about what type of job we're doing? And third, employee feedback. What do our employees say about how we're treating them?

I think those three factors are very important and they can take you a long way.

Mr. HORN. Thank you. Thank you. Oh, Mr. Perry, you have——

Mr. PERRY. If I just may add a small detail. Often the question comes up, what best management practices could we apply to government operations in order to improve our performance? And I think again I would just emphasize what Mr. Walker has said. What GPRA embodies is the answer to that question. The issue then is how rigorously will we apply it, and it's a matter of execution. I don't think we need to search much further for the best management practice. I think it is well-outlined there. It's a matter now of rigorously executing that directive.

Mr. HORN. Thank you. Thank you, Mr. Chairman.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much, Mr. Horn.

Let me start, Mr. Walker, with you. I'll just go straight down and there's no one else here. I'll just go till I finish my question and we'll get on to the next panel.

In 1969, an exchange program was established that lasted through the early 1990's. What's your opinion of that program and do you know if there are any other initiatives that are currently underway?

Mr. WALKER. My understanding is that program involved exchanges, both public sector people going to the private sector and private sector coming to the public sector, for up to around 2 years, which is similar to yours, that there were about 800 to 900 individuals that took advantage of that program during that period of time, and that ultimately I believe it was terminated in the early 1990's by former President Bush, if I am not mistaken. My understanding is that as time went on, there became some reluctance on behalf of the Federal managers to allow their employees to go out into the private sector; that there was a desire to be able to obtain private sector individuals to come into government for a period of time, but there was less desire on behalf of the public managers to allow their people to go out to the private sector because in many cases they felt that they didn't have enough people to begin with and they needed to have a net plus if there was going to be some type of a fellowship program rather than just an even exchange.

I am not aware of any overall programs. Director James may be. I know that we at GAO from time to time have had exchange programs and fellowship programs, and I have found that one of the things you have to be careful of in that regard, and I think your bill incorporates this, you need to have a cooling off period. You need to have a cooling off period whereby if the private sector sends somebody to government, then there's a period of time in which the government promises not to hire that individual, and vice versa. If the government sends somebody to the private sector, there's a period of time in which that employer promises not to hire that individual in order to provide reasonable assurance that they'll come back. I think you do have that in your bill. I think that's important.

But I think in reality what's going to end up happening is you're going to find that there will be great demand on behalf of the public sector to have private sector people. There'll be some willingness to allow public sector employees to go to the private sector, but not in as great a number, I believe, as the other way.

Mr. TOM DAVIS OF VIRGINIA. OK. You've seen the basics of what we've proposed. What are your comments on that? You skimmed over it in your remarks. What are the pluses and minuses as you see it?

Mr. WALKER. Well, I haven't read the exact bill. From a philosophical standpoint I think it has great conceptual merit. As I mentioned, you know, you've got it as a two-way program. You've also attempted to deal with some of the conflict of interest issues. That's obviously a matter that was always in the forefront of people's minds. I think those are manageable, but we need to have them in the forefront of our mind. You also have a cooling off period, which I think is a positive. I think the major point that I would make, Mr. Chairman, is I think realistically, given the fact that we have a significant shortfall in an adequate number of skilled and knowledgeable professionals in the Federal work force in the IT area, I think from a realistic standpoint you're going to find that this program will work best if you have more people coming into government than you have going out. And I think realistically that's the way it's going to work.

But you do allow flexibility, as I understand, for each individual department and agency to decide what should be done. And I think that's appropriate because I think, you know, it's going to vary agency to agency as to what the right answer is there.

Mr. TOM DAVIS OF VIRGINIA. You've reported that agency efforts to address human capital challenges in the IT area have generally been challenging. It's still a serious issue even though we're seeing layoffs and so on. Do you see the government stepping up their recruitment efforts as we get layoffs in the region at this point? And I'll let Ms. James or Mr. Perry answer that as well.

Mr. WALKER. I think we need to try to capitalize on the current slowdown, but I think we have to recognize that it's just a slowdown in the IT sector. The fact of the matter is the numbers that I have seen is there's still 400,000 to 500,000 net unfilled positions in the IT sector, you know, U.S.-wide. It was up to 900,000 to a million, and so while the imbalance is not as great as it was before the slowdown, it still is significant.

And you know, clearly we have to sell what we have to sell. I mean, the government has some things to sell that the private sector doesn't. It has the ability to sell in many cases additional responsibility, the ability to be able to make a difference for your country, better work-family balance, I think, than many private sector, somewhat better job security. There are certain things that it does have to sell and it does provide reasonable compensation where I think we need to look at whether or not we need to have even more flexibility with regard to critical occupations.

But if people are looking to maximize their net worth rather than their self-worth they're not going to come into government. They've got to be looking to maximize their self-worth.

Mr. TOM DAVIS OF VIRGINIA. I just have an article in front of me from a local newspaper. It said that the jobless rate rose in Prince William County, which is right outside of Washington, which is in my district, last week. It rose to 2.1 percent. And that Manassas Park rose to 1.6 percent unemployment. So you have to put it in perspective, which is, I guess, what you're saying.

I am going to ask if Ms. James or Mr. Perry have any comment. You don't have to. And then I am going to yield to Mr. Turner.

Ms. JAMES. Certainly. I would just say several things to a couple of the questions that you posed to Mr. Walker. In terms of governmentwide exchange programs there have been, from time to time, programs like that within the Federal Government, not specifically targeted necessarily to the IT profession like this particular legislation that you're proposing does.

Yes, there was a program that was much talked about and heralded in the early 1990's and I would just like to say that, Mr. Chairman, my understanding of that is that program did not fail on its merit, but failed because of some of the administrative and management issues surrounding it. And so I think that it's important to understand that it is a good idea and one that the Federal Government I believe could benefit from.

I know that in your specific legislation you try to address some of the issues that were surrounding that first program. The one that seems to be most troubling of course is the conflict of interest that caused some serious concern. And I trust that as it goes through the legislative process, that those concerns will be addressed and even strengthened.

Yes, I think you point out quite accurately that while there may be some cooling off in the IT market, that certainly isn't indicative of what we see in this particular area. It is still highly competitive and it is still difficult. All you have to do is ask some of our managers how difficult it is for them to recruit and retain a skilled IT work force. And so there is a lot yet to be done and we look forward to working with you on resolving some of those issues.

Mr. PERRY. Just a quick followup on one point that leads to a thought about the two-way flow of these people. First of all, as has been pointed out, as we are all keenly aware, this is not a short-term imbalance shortage issues. This is a very long-term issue. And as Mr. Walker pointed out, many statistics show that many of the IT jobs of the type that we're talking about will remain vacant because the people in the short term are just not available. So as we think about this, I think that has to be a part of our thought process. We're not fashioning a solution to bridge some short-term problem that's going to go away in 2 years. This is going to be with us for a while.

And in that regard, if you, in my judgment, take a look at the issues facing the Federal Government, IT security, and again the things that Mr. Walker eloquently outlined in his opening statement, one could easily argue that the crisis or emerging crisis facing the government is even more significant than that which faces the private sector. And as a result, there should be an effort to make sure we take care of what the government needs to have done, which may mean that there should be a greater emphasis on bringing people in.

Now, it's obviously the case that as we move people out to the private sector, they can gain some knowledge that will be useful to the government when they return. The question is, can we wait 2 years to make that happen?

My only point is I think the situation that we face would cause us to want to give heavy emphasis to bringing people in.

Mr. TOM DAVIS OF VIRGINIA. Let me just make one comment. If you go back 10 to 15 years, a lot of people went to the government because of security. You did get security in a government job. You did get some of the financial rewards or advancements but there was some predictability. However that's no longer true if you look at how the Federal work force has shrunk.

We have also cut benefits. The FEHBP has been threatened back and forth. We have seen COLAs that have been cut. If you're retired getting your Social Security, you got your COLA on time. If you're a Federal retired employee, you got your COLA delayed. We have seen parking taken away. We saw government shutdowns.

Again, we have just used this as a budget item to be cut instead of our greatest asset. And the legislation that we have proposed here is just a small step in trying to—it is still a recognition that our employees are an asset. And we have these folks and if we properly train them and motivate them for the taxpayers of America, we can get more out of it. We've got some great people who have given their lives to government service. And we abuse them, from our perspective. We are just not using that asset. This is an opportunity to ask some of these people to go out and grow professionally and bring ideas, cross-pollinate public and private and bring them both—that's all we're talking about here.

Let me yield to Mr. Turner.

Mr. TURNER. Thank you, Mr. Chairman. I just want to followup, Mr. Perry, on what you've said. You seem to be saying that you believe that the more important thing to accomplish with the chairman's legislative proposal is to bring people into government, rather than to send government employees out. Expand on that just a little bit for me and what is your fear about Federal employees going out or your concern about that?

Mr. PERRY. Yes, Congressman. I don't have a fear about Federal employees going out. In fact, I think, as I say, it will be a useful thing. The experience that they would gain and bring back would be very beneficial, no question about it.

It's a question of as we think about what we want to try and accomplish, for example, in the area of government and in the area of providing IT security and all that entails, it just seems to me that as we would supplement our current Federal work force with people from the outside who may have had different experiences with respect to those matters, and I can envision them now working side by side to accomplish some of these really big tasks that are on the table in front of us, I think both the private sector person and the Federal employee working together in that scenario would benefit from the kind of things they would be working on and it would enable us to get out in front of the curve on some of these issues.

So my concern is a matter of urgency. If, in fact, we believe that some of the IT issues facing the government are that urgent, then it would appear to me that we would put the full court press on those urgencies.

Mr. TURNER. Now I would assume that current practice is in many cases to bring private contractors in to perform tasks and to take on these big projects you are talking about, so that we really don't depend currently on Federal employees to do a lot of these bigger tasks. Is that an accurate assessment?

Mr. PERRY. At least in part. But I think it falls to the Federal Government manager to develop the idea or the business process improvement. We don't go to the private sector, for example, and say—I don't think in many instances—ask them to initiate what business processing improvement we should work on in a given agency.

So I think there is some level of IT management inside the organization, which is under the jurisdiction of the Federal employee, to first decide what it is that we need to do. And then I do agree with you that when it comes to execution, then we often would defer to contractors in the private sector to help with the execution. But the initial idea generation or system design is often done by people inside the agency.

Mr. TURNER. Mr. Walker.

Mr. WALKER. Mr. Turner, I think you will find that most IT operations in the Federal Government will have a core group of Federal workers and they will rely, to differing extents, but fairly significantly, on outside contractors, in part because they made the judgment that there are certain types of activities that should be contracted out and in part because even though there are certain activities they would prefer to be done by Federal workers within the government, they have not been able to attract, retain and motivate an adequate number of qualified people to get that done. And therefore, they have been placed in the position of having to contract out in certain circumstances activities, because they really have no other choice in order to be able to get it done.

What is critically important is that irrespective of what does get contracted out, is that we got to have an adequate number of people with the right kind of skills and knowledge to manage cost, quality and performance of those contractors. Because without doing that, then both the government, the taxpayers and, frankly, I would say the contractors as well are at risk as a result of that. So it is going to be a serious and continuing challenge, I think, in this area.

Mr. TURNER. Mr. Walker, Mr. Perry of course made the emphasis on the more urgent need of bringing outside private sector folks into the government, and I was interested in your assessment of whether or not there may be some resistance on the part of the private sector to participate in this exchange program because I would think that if they felt we were bringing people in from a company that might have the opportunity or currently be contracting for those IT services, they may not want to loan that employee to the Federal Government and transfer that skill in-house for the government rather than having the option of continuing to contract it.

Mr. WALKER. My personal view is I think it needs to be a two-way street. I think it is beneficial for it to be a two-way street. However, I think from a practical standpoint that there will be more people coming into government than will be going out of government.

Clearly, in exchange, there are a number of potential benefits. First, both sides benefit from the exchange of knowledge and experience. No question about that. But post-exchange program, I would argue that the private sector is in a position to benefit potentially more on a recurring basis than the government might benefit because both are benefiting from the exchange and that is because a growing percentage of information technology projects are being done by contractors. And obviously, to the extent that you have a contractor who is willing to participate in this exchange program and they gain knowledge of the government and how it operates and its systems and its processes and the key players, then they are obviously in a good position to hopefully more effectively compete for future government work.

There's nothing wrong with that. I mean, we need quality contractors to be able to help us address our challenges here.

But I think realistically, my view is that while exchange is a good idea and while it ought to be a two-way street, that realistically, we would need relatively more people to come in than we're probably going to be able to send out. And I hope and I expect, quite frankly, that firms like Accenture are not doing this merely for the profit motive, they're doing this to do something for their country. Personally, I believe everybody ought to do something for their country, and this is a pretty constructive way to get that done, I think.

Mr. TURNER. Ms. James.

Ms. JAMES. There's a sort of hidden benefit, I believe, in this program and it's sort of an unspoken benefit that I think is worthy of note, and that is, as we talk about the exchange and, you know, who is to benefit more, people as they go out to the private sector or the private sector as they come in, one of the challenges that we have before us with the Federal work force right now is to create environments where workers—to recruit and retain excellent employees. One of the unspoken fears, I believe, is if they go to the private sector, they might not come back, that they will find that environment so seductive.

I think that our challenge as Federal managers in this, people who have been given the task of building a Federal work force is that we will create an environment with the proper incentives, with the proper authority for managers in terms of the work and creating interesting work. The challenges that people have in the Federal Government in terms of the types of work that are available to do just aren't available in the private sector. If you are an IT manager and you want to be on the cutting edge and have the opportunity to work on some of the most interesting and exciting work going on in your field, in many cases that is happening in the government.

So I think it creates an opportunity for us to become competitive and more excellent in terms of what we offer workers in the work force, in terms of the work itself, not just in terms of incentives.

Mr. TURNER. Mr. Perry.

Mr. PERRY. If I may add on this issue of the two-way street, I think what is really good about this legislation is that it enables that flexibility. I am only suggesting that we don't stay only with that.

There certainly will be some contractors in particular who will be very interested in the exchange for various reasons. But there, I believe, on the public service side of this, will be a number of companies who are not contractors and have no continuing interest in doing contracting IT work with the government, but who nevertheless have IT professionals on their staff doing e-government types of things, and those people would benefit immensely from having an opportunity to come to the government to work on a project that is much bigger than they might work on in their own place. It would be a developmental thing for that person to come to the government to work on such a project.

And in addition, there is that issue of public service. And as it is the case that we've got some big challenges ahead of us, I think there would be a number of private sector companies who would be willing to participate in this on a nonexchange basis. The legislation enables it to happen both ways, and I think we ought to take advantage of both aspects of that.

Mr. TURNER. Thank you. Thank you, Mr. Chairman.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much. Let me just go through my questions.

Mr. Walker, last October, Congress gave GAO additional personnel authorities through legislation. These included the authorities to offer voluntary early retirements, voluntary separation incentives to reshape the GAO work force as well as the authority to establish senior level positions to meet critical scientific, technical or professional needs in such areas as economics and information technology. Do you think other agencies would benefit from this flexibility?

Mr. WALKER. From a conceptual standpoint, yes, I do, Mr. Chairman. I would divide them into two categories. In the area of the senior level position and also the area of voluntary early outs and buy-outs in order to realign the work force rather than downsize the work force, I believe that has broad application and, in fact, broad acceptance based upon my experience last year.

The last proposal, which is the proposal that we had which changed the way in which RIFs are conducted, is somewhat more controversial. I believe it has merit, but I believe it is an issue that should be considered within the context of broader Civil Service reform at a later date as part of a comprehensive package with discussions with all the interested stakeholders in conjunction with that, because it's really focused on the central premise that more decisions in government should be made based on skills, knowledge and performance rather than years of service. And I think while that has considerable merit, it relates to more of the element of more fundamental Civil Service reform.

Mr. TOM DAVIS OF VIRGINIA. It's also come to our attention that many agencies view legislative relief from Title V as their only option to solving hiring challenges. Many agencies view the application process for existing flexibilities to be either too burdensome to meet or too time-consuming.

In your view, do you think agencies understand what hiring and recruitment and retention flexibilities are available to them?

Mr. WALKER. I don't think that they have a good sense of all the flexibilities that are currently available. And I know that OPM recently published a document that was intended to try to help them gain a better understanding of what flexibilities are available.

I think that it's also important for OPM to take a look at how many of those flexibilities require OPM approval and to what extent can more authority be delegated to the agencies, possibly with periodic followup to make sure people aren't abusing any of that delegated authority, because clearly one of the biggest challenges we have right now is being able to hire people in a timely manner. That is a huge problem. People have too many different options. They aren't going to wait around when they have these other options, and so I think it's clearly an area that needs additional focus.

Mr. TOM DAVIS OF VIRGINIA. Mr. Perry, let me ask you a couple of questions. You mentioned mentoring in your testimony as an important benefit offered to employees. I agree with that. Some of the testimony today mentions the importance of reverse mentoring, which is where young IT professionals are paired with senior level managers for a specified period of time. Have you considered offering such a benefit to your acquisition and IT work forces in your recent recruitment and retention efforts? And have you measured the percentage of individuals under 30 or under 35 coming into government, and do you know how many of these individuals are coming in at the GS–12 to 15 range? Do you have any feel for that?

Mr. PERRY. Let me talk about the mentoring aspect first. I certainly agree that can happen and should happen. That's very powerful. We haven't talked about it in terms of one-on-one mentor-protege, as I have used it in the private sector, but we have certainly talked about that in terms of groups.

Now with respect to the work force, people that we're bringing in and their average age, I am not able to quote the average age of our recent recruitments. I know that we have brought in about 29 IT professionals. My expectation is that they are under 30, but I don't know as a fact. I know our average age for our IT people is about 46, and we have a little over 1,100 of them. So that tells you that our work force is on the higher age side.

Mr. TOM DAVIS OF VIRGINIA. That's the younger age side from my perspective.

Mr. PERRY. Relative to their remaining work years, on the higher side.

Mr. TOM DAVIS OF VIRGINIA. Also, you mentioned the newly created CIO University. Is this a governmentwide program?

Mr. PERRY. It is a governmentwide program. It is an on-line self-paced study program. As I understand it, there is a great deal of utilization by IT people and that is the case within GSA as well. So it's just another one of those tools to provide for the updating of the IT work force. I think it is being used very successfully at this point.

Mr. TOM DAVIS OF VIRGINIA. I think those are the questions that I wanted to ask. Anybody want to add anything before we get to the next panel?

I would like to say to all of you, we appreciate your being here. Ms. James, thank you on your maiden testimony up here. You did great. We look forward to hearing from you again. And why don't we take about a 2-minute recess as we switch panels.

[Recess.]

Mr. TOM DAVIS OF VIRGINIA. I would like to welcome our second panel to the witness table. We have Dr. Steve Kelman of Harvard University; Martin Faga of MITRE Corp.; Dr. Ernst Volgenau of SRA International; and Steve Rohleder of Accenture.

And as you know, it is the policy of the committee to ask everyone to swear and raise your hands.

And let me just say, Dr. Kelman, to start with, I have seen your daughter is in the room and your father-in-law, Senator Metzenbaum, is here, and we welcome you, Senator, to these proceedings.

Would you stand, please, and raise your right hands. We'll swear you in.

[Witnesses sworn.]

Mr. TOM DAVIS OF VIRGINIA. I think you know the rules. Orange light will go on 4 minutes in, and try to sum up and we'll go right to questions.

Steve, we'll start with you and then Mr. Faga and move straight on down the row.

STATEMENTS OF DR. STEPHEN KELMAN, ALBERT J. WEATHERHEAD III AND RICHARD W. WEATHERHEAD PROFESSOR OF PUBLIC POLICY, HARVARD UNIVERSITY, JOHN F. KENNEDY SCHOOL OF GOVERNMENT; MARTIN FAGA, CEO AND REPRESENTATIVE OF THE NATIONAL ACADEMY OF PUBLIC ADMINISTRATION [NAPA], THE MITRE CORP.; DR. ERNST VOLGENAU, PRESIDENT AND CEO, AND REPRESENTATIVE OF THE INFORMATION TECHNOLOGY ASSOCIATION OF AMERICA [ITAA], SRA INTERNATIONAL; AND STEVE ROHLEDER, MANAGING PARTNER, ACCENTURE

Mr. KELMAN. Thank you very much for holding this hearing today to try to focus attention on the government's need and ability to get good people working in public service.

Congressman Turner, in his opening statement, made some reference to the passage in the House yesterday of the bill on allowing government employees to keep frequent flyer miles. I had the privilege while I was in the government of getting such incredible travel perks as a trip to Warren, MI in February to visit the Army Tank and Automotive Command. There were other similar perks of my office. And I think——

Mr. TOM DAVIS OF VIRGINIA. That explains why you are at Harvard, I guess.

Mr. KELMAN. Whatever. I think as the Comptroller General pointed out in his testimony, it is a small thing, but it is a good signal to the Federal work force about a more positive attitude.

As a professor in an institution devoted to training people for public leadership, I see myself as a sort of frontline soldier in the government's war for talent. And we should all be disturbed, though, by a very dramatic statistic, which is that 20 years ago or so, about three-quarters of graduates in our Public Policy Program at Harvard took their first job in government. And now that figure is down to about one-third. And, in fact, our dean, Joe Nye, is so concerned about this problem that he is going to be personally chairing a series of four meetings up in Cambridge during the next academic year with senior government and private sector people to try to figure out what we can all do together to help the government win its war on talent.

Let me just highlight a few things from my testimony. First is the issue of recruiting people from outside government for midlevel positions, and there are three facts I think is very important to keep in mind. One is about how the government works, which is traditionally the government has recruited from people from the outside only at two levels, entry levels and senior political levels. That is fact 1.

Fact 2 is that a lot of my students and a lot of young people today fully expect to be doing a number of jobs during their career and not stay in one place.

Fact 3 is that a lot of young people, actually more than ever before because of high school and college programs, have experienced an interest in doing some public service.

When my older daughter—not the one who is here today—my older daughter was applying to college this last year, a number of the college applications from the schools she was applying to include in the application a thing saying, what public service have you done?

So the idea of doing some public service is more and more something that a lot of young people understand.

So I think that these three facts together suggest to me that government is missing an opportunity, No. 1, because people switch jobs a lot, to recruit some people at mid-levels rather than just entry levels, taking advantage of people switching jobs or whatever; and No. 2, by, in the career work force, only having people who are going to be doing entire careers in the Federal Government, missing an opportunity to allow young people who want to do a brief period of time in public service to do that. And I think there are potentially a lot of strategies the government should be looking at to try to take advantage of mid-level recruiting.

The one we are specifically considering today and I think is a fantastic innovative initiative that you announced this morning, Mr. Chairman, together with Steve Rohleder from Accenture, is the idea of giving industry an opportunity to lend some of their mid-level employees to do a 1 or 2-year period of public service and help the government out with its human capital crises in the IT area.

And some conversations I've had with senior government career people, I know they're very eager to get this Digital Tech Corps underway. So I hope we can do it at something more like Internet time than traditional time.

Second thing I wanted to talk about briefly is addressing human capital problems through other than just traditional H.R. kinds of issues, because there are a lot of things that are in the jurisdiction of this subcommittee and the full committee that don't come packaged to you as human capital issues, but really are human capital issues or partly human capital issues.

One area that I'm obviously interested in is procurement reform, where you and this whole committee have been engaged. One of the benefits of reducing for the customers within the government of the procurement system, of reducing the hassles and delays in the procurement system, is to make the government a more attractive workplace for those people so they don't have to deal with something where they have to wait 3 months to get a simple thing delivered to their office.

In this regard, just to take something that's been in the news the last few days, there have been these reports, you know, on small numbers, tiny numbers of abuses of the government credit card;

you know, 100 out of 50,000 transactions or something like that, some of which, on closer examination, turn out not even to be abuses.

But if we were to react in an old-fashioned knee-jerk way and say we have a few abuses and say we are going to destroy the whole system, it would not only hurt the taxpayer because the administrative cost savings of this—of the credit card are far, by a factor of 10, 20, 30, 40, greater than the cost of abuses, but it also would have a bad implication for the human capital crises for the government because it would return the front line government employee to a situation where they need to wait months just to get the simplest of things in their office.

So that's an example of where things that don't come under the rubric of human capital crises actually are part of it.

Similarly, and I will conclude here, the work that we do—you do in the subcommittee and the full committee does with the Clinger-Cohen Act or the Government Performance Results Act, young people want a workplace that is results-oriented, that is a high performance workplace. Taxpayers need that. So anything this committee does to get the Federal Government workplace a more results-oriented workplace is making the government a more interesting place to work for young people.

So as we think about the human capital crises, we shouldn't just think about narrowly things called "HR," but broader kinds of changes, many of them under the jurisdiction of this committee, that make the government a more attractive workplace.

[The prepared statement of Mr. Kelman follows:]

TESTIMONY OF STEVEN KELMAN, WEATHERHEAD PROFESSOR OF PUBLIC MANAGEMENT, HARVARD UNIVERSITY, KENNEDY SCHOOL OF GOVERNMENT BEFORE THE SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY, HOUSE COMMITTEE ON GOVERNMENT REFORM, JULY 31, 2001

Chairman Davis, Congressman Turner, and members of the Subcommittee, I would like to commend you for holding this hearing today and for your engagement in the issue of attracting and retaining a talented workforce for government, particularly in the IT arena but more generally for the important jobs for which we will continue to need government employees. This issue is a very important one, but it attracts little political visibility, which makes this Subcommittee's involvement all the more praiseworthy a public service.

I am a frontline soldier in the government's war for talent. As a professor at Harvard University's Kennedy School of Government, I take seriously my own responsibility to help our institution's mission to train public leaders. By "public leaders," we don't mean only people who work in government agencies, but we do see government service as an important way to exercise public leadership. We are disturbed – and everybody should be disturbed – by some dramatic numbers. Twenty years ago, about three-quarters of the graduates of our two-year master's program took their first job in government. Now that figure is down to about one-third. These figures are similar to those at other major graduate programs in public policy around the country. If government is having trouble attracting our students, who choose to attend an institution dedicated to public service, this should be a warning sign of the seriousness of the problems government faces today. Our Dean, Joseph Nye, is concerned enough about this issue that he has made refocusing our institution on its public service mission one of his core priorities. And as part of that, he will personally be chairing a series of high-level meetings at Harvard, beginning in September, involving senior people from government and the private sector, to help suggest strategies and to build awareness of this problem.

In my testimony today, I wish to address four ideas about ways to deal with the government's human capital crisis. There can be no magic bullet that will solve this crisis. We need to act along many fronts. I focus on these four areas because some are especially relevant to technology workers, and others involve broader issues within the jurisdiction of this committee. These four issues are: (1) using mid-level, shorter-term jobs as a way to deal with the human capital crisis, (2) ways to address the human capital crisis outside the narrow areas of "human resources" or "personnel" management, (3) designing federal workplaces to be attractive to young people, and (4) the political and media context of public-sector employment.

cruiting people from the outside for middle-level jobs

Government has traditionally recruited people from the outside at two levels – the entry level and the senior political level. And, with the exception of some agencies, government has also tended to assume that, once having entered government, entry-level hires will spend their entire careers there.

However, for many of my students, the idea of starting at an entry level in any job, private-sector or government, and staying in the same organization for 30 years, is inconceivable. Many young people assume that they will work in many organizations during their careers.

Government is missing one big potential source of talent if it is not willing to make much greater use of people hired from the outside into jobs in the career workforce in the middle levels of government – GS-11's through GS-14's – who have gotten great experience and great training in the private sector, and who are interested, not to come into government for a permanent job, but for a few ars of public service. I am thinking predominantly of young people in their late twenties, with perhaps 5-7 years of private-sector experience.

Getting people into government at these middle levels is particularly relevant in IT. There is a large pool of talent in the IT industry, who have been well-trained in their private-sector jobs, and it is an industry with high mobility.

There are a number of complementary strategies for gaining access to mid-level talent. One strategy, that is the subject of the initiative Accenture announced this morning with Congressman Davis, is for IT contractors to lend a number of promising mid-level employees for a period of public service, working as government employees and then returning to their firms. I have had the privilege to work with Steve Rohleder at Accenture to develop the idea of the Digital Tech Corps to a stage where Accenture has announced its willingness to commit some of their young employees to this program and here you, Chairman Davis, are introducing legislation to allow this creative, innovative idea to become a reality.

Some common-sense precautions should be taken in connection with this program to keep the involvement of the young people industry lends to government to fairly high-level strategy and design issues, and away from specific agency procurements, along with applying reasonable post-employment limitations that would prevent people from representing their firm upon return regarding a specific procurement that grew out of their specific efforts while in government.

From conversations with senior government officials, I know they are very eager to get the Digital Tech Corps underway – and soon. Let's see if we can make this a reality at a speed more reminiscent of the Internet Age than traditional government time! And let's see how many other high tech firms in the community are willing to join this commitment to public service a reality.

There are, of course, other ways to attract mid-level talent other than through having industry make available some of its own employees for a period of time. Government can directly hire people at middle levels who have left jobs in industry, whether because they've been laid off or because they'd like to try a different kind of career for a few years, be it because of an interest in public service, a desire for less travel or a more family-friendly workplace while they have young children, or whatever. Some of these people might end up choosing to stay in government for an extended period.

The challenge here is to examine what practices and/or rules are inhibiting a change in agency hiring approaches to hiring more people from outside government for middle-level jobs, and to hiring people who might plan to stay for a few years. According to a recent article in Federal Times, the Peace Corps has a policy of limiting career officials to two stints of 30 months each, in order consciously to promote the entry of new ideas into the organization. As the government starts making e of more shorter-term middle level employment, we should probably be looking at the Peace Corps for lessons learned.

I would urge you to ask OPM to prepare a report to the Committee on these barriers – and to work with OPM to designate one or two pilot agencies to experiment with such hiring practices for IT employees, so we can see if this new model can be made an important part of our toolkit for dealing with the government's problems in this area.

Ways to Address Human Capital Problems Through Non-"HR" Policies

Too much of the focus in discussions of the government's talent crisis is on specifically human resources management (HR) issues – improving and deregulating the hiring process, dealing with salary issues, and so forth. These issues are indeed very important. But we need to understand that, more fundamentally, we need to worry about the content and context of government jobs. Smart young ople considering government employment want – and the American public rightly demands – government workplaces that are high-performance workplaces, that engage their workforce in exciting work to produce mission results for the American people. One of the most depressing of the findings we see when we talk with our students at Harvard about their impressions of government is that many see government jobs as mired in bureaucracy and insufficiently results-oriented to satisfy their own strong desires to "make a difference."

These issues are already in the domain of this Subcommittee, though they don't appear before you packaged as "human capital crisis" issues. Take procurement reform, which as you know is a special interest of mine and where this Subcommittee has been engaged in such a positive way. Among the important side benefits of procurement reform are to make government a more attractive workplace for government customers of the procurement system, by reducing procurement delays and hassles, and to make working in acquisition careers in government more attractive to young people by changing se jobs from bureaucratic rule-monitoring into what Deidre Lee, Director of Defense Procurement, and the Procurement Executives Council have called acting as "business advisors." Any time somebody comes before you and asks you to make the procurement system more bureaucratic again, ask them what effect this will have on our ability to attract talented young people into government.

Similarly, this Subcommittee has responsibilities under the Clinger-Cohen Act and the Government Performance and Results Act for creating a results-oriented government in the area of information technology. Nothing could more contribute to a feeling on the part of young people that they can make a difference in government than encountering agencies that are results-driven. I would therefore urge the Subcommittee to continue its oversight efforts to drive creation of results-driven government in the IT arena as part of its contribution to dealing with the IT human capital crisis.

Young People and Public Service

Agencies should be undertaking steps to understand young people better and to improve the fit between what young employees seek from employment and the design of government jobs.

One quick step agencies could and should take is to establish so-called "Reverse Mentoring" programs for information technology, which have become quite common in the private sector. In such programs, young IT-savvy employees (not necessarily even employees whose fulltime job involves IT) are paired with senior organization managers, in order to teach older executives about how to use technology tools more effectively. Such reverse mentoring provides senior executives with valuable information that will help them do their jobs more effectively, while providing young employees an opportunity to interact with top management. I would urge the Subcommittee to send a letter to the President's Management Council urging development of such programs.

I also believe that agencies need to learn more about what young employees want from their ork. The President's Management Council should take the initiative to establish a governmentwide

Young Employees Advisory Council, which would meet on a regular basis with PMC members to discuss issues of workplace design and ways for agencies better to meet the desires of young employees. Since I believe that many young people seek jobs where they can feel they are participating in delivering meaningful results, meeting the demands of young people for what they seek from employment dovetails with taxpayer demands for a well-performing government.

The Political and Media Contexts of Public Employment

Little is more demoralizing to current and prospective federal employees than the way people in authority in our society – including elected officials– use attacks on so-called "bureaucrats" as a source of cheap political points. A political scientist conducting research on how members of Congress campaigned for office noted a number of years ago the ironic fact that "members of Congress run for Congress by running against Congress." What he meant was that, in speeches and other activities back in the district, members attacked Congress as an institution, and even most of their colleagues, while presenting themselves as virtuous exceptions to the rule. Such a tactic, the political scientist argued, might have brought electoral success, but at high cost to Congress as an institution and to public confidence in our democracy.

Attacks on public servants in government agencies are equally tempting, and equally short-sighted. They reduce the attractiveness of public service, both because they make these jobs appear to be less appealing and because they tell people considering public service what they have to look forward to should they decide to choose this career path.

This Subcommittee has within its power to make at least a small contribution towards turning this counterproductive situation around. Members can promise themselves to hold their tongues whenever they were considering cheap shots and verbal abuse directed in a general way at the government's career workforce. And, while certainly this Subcommittee does not want to abandon its legitimate oversight role in examining, hopefully in a constructive way, agency problems and shortcomings, it should also commit to hold several hearings a year where career public servants are asked to showcase examples of successful, or improved, government performance through the use of technology in which those employees have personally been involved. It would be wonderful if, at least sometimes, career people brought before Congress were invited to be honored, not hectored.

Mr. Chairman, Congressman Turner, there are, as I mentioned earlier, many other ideas for dealing with the government's human capital crisis. We're going to need to attack this from many angles. So none of my suggestions should be considered as precluding or substituting for other measures.

This completes my testimony. I would be happy to answer questions.

Mr. TOM DAVIS OF VIRGINIA. Thank you. Mr. Faga.

Mr. FAGA. Thank you very much, Mr. Chairman. It is a pleasure to appear here this morning on behalf of the National Academy of Public Administration. As you know, Mr. Chairman, the Federal IT Work Force Committee of the Chief Information Officers Council has asked the academy to undertake an alternative pay systems study and also to assess related human resources management issues as it affects the Federal Government's ability to attract and retain information technology talent.

It hardly needs to be said here that the number of qualified workers currently available in the United States is way below the number of growing vacancies in the field. We find not surprisingly that the Federal Government needs a flexible and responsive human resources management system that it does not currently have. The currently available tools we find are not sufficient to the job.

The academy project team undertook an extensive search of literature and, importantly, interviewed chief information officers, financial officers, human resource directors and line managers from the public sector, from nonprofit organizations, from academia and the private sector. We paid particular attention to the innovative practices that we found in some private sector companies.

Several themes emerged from this. Research is clear on one thing—not surprising. To compete for and retain qualified IT professionals, salaries must be within a competitive range. Now the usual definition of competitive range is within 10 percent of the market norm. Interestingly enough, there are categories of IT workers in the government that are in that range. There are many others who are not.

There are a number of new and modified compensation approaches that may help to improve recruitment and retention of IT professionals. They certainly do in private sector. They do at MITRE. One is establishing market-based pay systems.

Second, a broad-band approach to the pay structure, that is, allowing pay for a given job to range as much as plus and minus 50 percent from the average for that job. Moving to compensation systems where pay is based on skill and experience—I'm sorry on skill and experience in the field and not on the definition of the job. Pay systems where annual pay increases are based on merit rather than length of employment, a change we made at MITRE just a few years ago. Ensuring that compensation is linked to the organizational goals and objectives, as we invest in training people so they can carry out jobs that are important to the institution, not something that is just a peripheral interest perhaps of the employee.

Compensation systems for IT professionals need to be separate from the compensation system for other kinds of jobs. This is the case at MITRE and many private corporations. And there is the need to use various mechanisms to increase total compensation. These are bonuses and other special forms of pay. Once pay is in the competitive range, it does not play a major role in retaining IT professionals. In our studies of ourselves at MITRE, it ranks fourth.

Five key nonpay factors that are important include good management. In fact, employees generally don't leave employers, they leave managers; that is, their immediate manager is somebody they don't want to work for.

A good work environment. This includes physical environment but also the IT environment, of course, and the nature of the work.

Challenging work. This has been spoken to by the previous panel, and it cannot be overemphasized.

Flexible working arrangements, allowing people to work essentially on flex hours to the extent that the job permits, and the government is in pretty good shape in this regard.

Training and development. Throughout a career, people need lots of additional training, including a form of training we find very important at MITRE, and that is supporting employees toward getting a degree, which is something generally the government doesn't do.

Now we have been able to implement most of these principles in our technical work force at MITRE with good results, And I'd be happy to talk about that in the questions. I'd also like to add my support to your information and technology executive exchange initiative. I think this is an important step in bringing people to government with special skills as well as loaning people from government. Moreover, importantly, I think that it recognizes that government won't and probably shouldn't hire all of the skilled people it needs on a full career basis. This is a big change for government, as has been said before.

In summary, Mr. Chairman, information technology has the power to transform the level, quality and quantity of government services provided to American citizens. To realize this goal, the Federal Government must have the tools needed to win the war for talent. The tools in the current system are not adequate to do the job.

Thank you very much.

[The prepared statement of Mr. Faga follows:]

TESTIMONY OF THE NATIONAL ACADEMY OF PUBLIC ADMINISTRATION BEFORE THE SUBCOMMITTEE ON TECHNOLOGY AND PROCUREMENT POLICY

July 31, 2001

Mr. Chairman, members of the Committee:

I am Martin Faga, President and CEO of the MITRE Corporation and a Fellow of the National Academy of Public Administration.

The National Academy of Public Administration appreciates the opportunity to appear before the Subcommittee and to share its views on the challenges facing the federal information technology workforce, and on the ways that federal pay might be changed to help address the federal government's ability to attract and retain well-qualified information technology employees.

The Academy is an independent, nonpartisan, nonprofit organization chartered by Congress to assist federal, state and local governments in improving their effectiveness, efficiency, and accountability. For more than 30 years the Academy has met the challenge of cultivating excellence in public management and administration. The Academy's most distinctive feature is its membership of 480 Fellows: current and former Cabinet officers, members of Congress, governors, mayors, legislators, diplomats, business executives, public managers and scholars. They are the foundation of the

Academy's activities from inception through implementation, serving on project panels and guiding other major endeavors.

Recently, the Workforce Committee of the Chief Information Officers Council asked the National Academy of Public Administration to undertake a study of alternative pay systems and related human resources management issues that might allow the federal government to be more successful in its ability to attract and retain the information technology talent needed for the federal workforce.

The dimensions of the issue are well documented. The federal government is a primary consumer of information technology (IT) systems and capabilities. In fiscal year 2001, the federal IT budget exceeded $42 billion, with a total investment of approximately $150 billion. This number is expected to grow steadily as every department, agency and organization in the federal government, from the White House to the Capitol, to the Supreme Court, from the Department of Agriculture to the Department of Veterans Affairs to the Administrative Office of the U. S Courts will be making significant investments in information technology.

With its rapidly increasing reliance on IT and with an array of often enormous and complex IT systems to maintain, federal agencies are finding that maintaining a skilled IT workforce is a key element of accomplishing their mission. Because the federal government's use of IT impacts the lives of every citizen, from the Consumer Product Safety Commission's Dangerous Toy List to the FAA's flight control systems to social security benefits administration to entire defense systems, it has the responsibility and the duty to provide the very best workforce to manage and implement high technology products. As of the end of fiscal year 2000, Office of Personnel Management data show that there are approximately 60,000 IT professionals in the federal government. In the next 10 years, the Bureau of Labor Statistics predicts the federal government will need an additional 16,000 IT workers.

Other studies, including those by the Information Technology Association of America and the Gartner Group, provide evidence that the problem is even more severe than the BLS projections portray. “Premium skills” jobs in areas such as web systems administration, electronic commerce analysis, database administration, internet architecture and web applications programming are where the largest gap between supply and demand for IT jobs currently exist. This need has forced organizations to offer highly competitive compensation packages to meet their workforce requirements.

Recent government studies have pointed out the central importance of IT, but more importantly the inherent risks if technology is not managed properly. The General Accounting Office in a recent report designated computer security as a government-wide high-risk problem. The U. S. Senate Committee on Governmental Affairs, in its June 2001 report *Government on the Brink,* identifies information technology management as one of the overarching problem areas that are most critical throughout the federal government.

Against this backdrop, there is a significant challenge looming that if unresolved will make significantly more difficult the ability of federal agencies to fully carry out their missions. In a matter of years, the federal government is in danger of having a severe shortfall in its workforce of IT professionals who can develop, implement and manage IT systems and provide expert policy and procurement guidance. The problem is the result of a number of converging factors facing federal information technology programs:

- A need to increase the IT workforce by 20 percent over the next 7 years
- An aging workforce, of which 50 percent is eligible to retire in the next 5 years
- An IT labor force that will have its choice of more than two positions for every qualified candidate
- A human resources management system that is inflexible and unresponsive to the changing demands of the modern work world
- A cumbersome recruitment process
- Inadequate tools to motivate employees
- A lack of investment in continuous learning
- An outmoded classification system
- A pay gap

The Academy's research on the issues of pay, and the relationship between pay and other human resources programs, is particularly useful. The information cited below is excerpted from the Academy's publication *Comparative Study of Information Technology Pay Systems: Research Report (February 2001)*

Many companies are redefining compensation systems and approaches to improve their ability to attract and retain IT professionals. Both the literature and the interviews are clear about one thing: to compete for and retain qualified IT professionals, a private sector organization must first offer salaries that are competitive with the market. If an organization's salaries are not competitive, none of the compensation and non-compensation techniques identified and discussed below will work. A February 2000 study by the U.S. Office of Personnel Management, *Private Sector Compensation Practices*, found that companies tend to match competitors in salary and benefits

Once an organization's salaries are competitive, there are a number of new or modified compensation approaches that may help to improve recruitment and retention of IT professionals. These include:

- Establishing market-based pay systems
- Using broad band approaches in structuring pay ranges
- Moving to compensation systems where pay is based on the person and not the job
- Adopting compensation systems where annual pay increases are based solely on merit and not on length of employment
- Ensuring that compensation systems maintain line-of-sight (i.e., that levels and increases in pay are easily linked to the company's goals and objectives)
- Setting up compensation systems for IT professionals that are separate from the compensation system for other types of jobs
- Using various mechanisms to increase total compensation

Market-Based Pay Systems—Market-based pay systems are pay structures where an organization's occupations (or job types) are benchmarked against similar jobs in the labor market and where the pay for the organization's occupations is set at or near the market rate. In other words, market-based pay provides for base pay that is competitive with the market. The use of market-based pay systems is the major area where current industry practices are inconsistent with the literature. All of the companies benchmarked use market-based pay systems. All of these companies consider that their market-based pay systems are a key factor in enabling them to attract and retain qualified IT professionals. All of the companies evaluate their job types once or twice a year via pay surveys. Some of the literature, on the other hand, maintains that traditional pay systems that benchmark the market do not work. This same literature also maintains that companies must evaluate their jobs to determine competitiveness at least three times each year.

Broad Pay-Range Approaches—All of the companies benchmarked use broad ranges in structuring the pay ranges of their various levels. The typical range spread is fifty percent below and above the mid-point (the midpoint is usually the industry average). All company representatives explained that they had such broad ranges in order to maximize the flexibility of the manager and the HR specialists in attracting and retaining qualified IT professionals. One company also maintained broad pay ranges to achieve a flatter organization structure—broad pay ranges allow this company to continue to increase an individual's pay without having to promote the individual to a new level or assign the individual to a different occupation. Broad ranges allow the company to retain good technical people without having to make them managers and supervisors. An October 2000 article in *Computerworld* magazine, in discussing the benefits of broad banding IT occupational pay ranges, states that broad banding (where there are broad pay ranges) gives management the flexibility to staff employees on projects that will broaden their technical and managerial skills.

Compensation Systems Where Pay is Based on the Person versus the Job—Although some of the literature stresses that this is the best (and sometimes only effective) approach to attracting and retaining IT professionals, none of the companies benchmarked use this approach. In every case, companies base pay on the duties, responsibilities, and authorities assigned to the job. These companies do, in fact, use other pay mechanisms that enable the organization to recognize differences in performance or differences in availability in the labor market. Such mechanisms include recruitment bonuses, retention bonuses, project awards, and other approaches. These approaches are discussed below.

Merit-Based Pay Increases—All of the companies benchmarked include annual pay increases based on merit. None of the companies make pay increases based on cost-of-living; however, they do adjust pay ranges for specific IT occupations when required to keep pay in line with the market. Such increases are made based on comparing company salaries with results of the salary surveys. These practices are consistent with the results of the literature review, including the findings in the OPM study, that most companies do not give across-the-board salary increases, rather annual adjustments are based on merit.

Ensuring that Compensation Systems Maintain Line-of-Sight—Maintaining line-of-sight in a compensation system means that levels and increases in pay are easily linked to the company's goals and objectives. This helps to ensure that employees work to achieve these goals. The literature indicates that compensation approaches that were very popular in the 1990s—competency-based pay and variable pay, to name two—are losing popularity because these approaches do not maintain line-of-sight. The literature attributes this weakness to poor design. For example, most competency-based pay plans are ineffective because they are too complex and burdensome and do not measure the competencies critical to the business's success. Results of interviews with companies would seem to verify this, as only one in four is planning to begin using this pay plan. One banking company interviewed is planning to implement variable pay over the next year, making a larger percentage of the employee's salary will be at risk and, hopefully, motivating the staff to work to achieve the company's goals and objectives.

Setting Up Separate Compensation Systems for IT Professionals—None of the companies interviewed have a compensation system for their IT professionals that is separate or different from the compensation system for other types of exempt jobs. In fact, one of the large defense contractors interviewed just recently switched from a system of different compensation systems for different business units to one corporate-wide compensation system. The director of compensation explained that having separate systems was a barrier to communication and decision making because each business unit used its own job titles, grad/pay levels, pay ranges, etc. In its study of private sector compensation practices, OPM found that about half of the 41 companies interviewed use different compensation strategies for different business units.

Mechanisms to Increase Total Compensation—The literature outlines different approaches to increase total compensation without increasing base pay. These include signing or recruitment bonuses, retention bonuses, referral bonuses, hot skills or technical pay premiums, on-the-spot awards, team bonuses, paid overtime, and stock options. The companies interviewed used some but not all of these as described below:

- *Signing or Recruitment Bonuses*—All benchmarked companies use signing bonuses. These are a one-time payment to an employee to attract him or her to take a job with a company. Typical amounts ranged from $3,000 to $10,000; and might be paid up front or in increments over a three or six-month period. In most cases, the hiring manager and HR office work together to determine who receives them and for what amount.

- *Retention Bonuses*—These are one-time payments to existing employees intended to keep them with the company. The companies use retention bonuses sparingly or not at all.

- *Referral Bonuses*—These are one-time payments made to existing employees who refer a candidate who is hired. Sometimes the company makes the payment in two increments. The first at the time the new employee is hired; the second after the new employee has been with the organization three to six months. All of the companies interviewed use referral bonuses. In fact, all companies interviewed find that referral bonuses are very effective in attracting qualified IT employees who will likely stay. One interviewee explained that this is because the individual who makes the referral has already "pre-screened" the candidate and has some confidence that the individual will fit into the company culture. Amounts range from $1,200 to $6,000 for entry to mid-range employees; and can be as high as $20,000 for senior employees.

- *Hot Skills or Technical Pay Premiums*—These are one-time or continuing payments to employees with scarce IT skills that are in demand. None of the companies interviewed use these premiums, primarily because they are assured that their salaries are competitive due to their market-based compensation system.

- *On-the-Spot Awards*—These are one-time awards made to individuals who demonstrate outstanding performance on a specific project or during a specific time period. One company interviewed is instituting on-the-spot awards this year. The others do not use them.

- *Team Bonuses*—These are one-time awards to members of a team who have met or exceeded a pre-defined milestone or goal. One of the companies uses these routinely with their IT professionals who are developing mission-oriented products. None of the other companies use team bonuses.

- *Paid Overtime*—One of the companies interviewed pays their exempt employees (up to a certain level) for overtime worked on a straight time basis (i.e., not time-and-a-half).

Stock Options—None of the companies interviewed offer stock options to employees below the executive level.

Non-Pay Factors That Are Important

Once pay is within the competitive range, pay does not play a major role in attracting or retaining IT professionals. In addition, money is a weak tool for stimulating imaginative thinking and creative problem solving.

IT workers value flexible work arrangements, family-friendly benefits, senior leadership that they can trust and look up to, training and education, a chance for creative expression, and other conditions that create a good working environment. Much of the recent research and literature provide various lists and rankings of what IT professionals want in their jobs and work life. An interesting variation on the lists of the desirable factors is the reasons that IT professionals leave their jobs and approaches to avoid conditions leading to these reasons:

1. Supervisor—IT professionals unhappy with their boss or manager. Make sure that supervisors play the role of performance coach. Also, promote relationships among co-workers (e.g., company softball team), subordinates, clients, etc.
2. Schedule—the key here is flexibility as some want to work more, some want to work less, some want to work on their own schedule.
3. Work—IT professionals want new challenges.
4. Skills—IT professionals want to be learning all of the time, so companies must maintain an environment of constant learning.
5. Location—some IT professionals leave because they want to work in a new city or because they want to work at home.

In its January 2000 study, Watson Wyatt found that the decision to resign is strongly influenced by conflicts with managers and/or coworkers, unpleasant work environment, lack of time for personal responsibilities, and/or dissatisfaction with benefits.

The review of the literature and results of interviews in the benchmarked companies are generally consistent about non-pay factors that are important for recruiting and retaining qualified IT professionals. These factors can be boiled down to five areas:

- *Good management*—IT professionals want a sense of trust in their senior leaders; they want to work for people to whom they look up to. It is not necessary that their senior leaders be more technically proficient than their staff members. To an IT professional, good management means that their supervisor and managers should be accessible, communicate openly, give sound feedback on performance, make sure that their staff members receive credit for their accomplishments (and not take the credit for it themselves), and tell the truth. One program at a benchmarked company offers an interesting approach to achieving good management. This company (a large defense contractor) is piloting a program they call "reverse mentoring." A junior IT professional is teamed with a high level executive in another part of the company, with the objective that the junior person provides guidance to the executive on how to use technology and resources available through technology. After nine months, the company says that the results are "very positive." A January 2000 study by Watson Wyatt, *Work USA 2000*, reports that trust in senior leaders is one of the top drivers of employee commitment. The report identifies those factors that drive trust in leadership as: (a) gaining support for the company's direction; (b) promoting the most qualified employees; (c) explaining major business decisions; and (d) motivating employees to perform at a high level. In *The Rewards of Work: What Employees Value*, a September 2000 study by Sibson Company and WorldatWork that surveyed 1200 companies in the U.S. (of which 210 are IT companies), the level of trust in management was found to be low.

- *Good work environment*—IT professionals want a sense of affiliation with their organization and their co-workers. They want to feel like they are working for an organization that is doing "good" in the world. They want to feel connected to those with whom they work. When one Compensation Manager at a benchmarked company (banking) was asked what elements the company would change in its reward system to improve the ability to attract and retain IT professionals, he answered that the first thing he would do is implement programs to ensure that the IT professionals "like working for the company." He mentioned culture, environment, caring and appreciation of employees.

- *Challenging work*—much of the literature and many of the companies interviewed suggest that challenging work is the most important factor in attracting and retaining qualified IT professionals. *The Rewards of Work* study found that work content rewards are the most highly rated type of reward for retention and motivating performance. One of the companies interviewed stated that "giving work that is valuable" is one of two elements that enable the company to attract and retain qualified IT professionals. Work content includes the work itself, variety of skills, autonomy, meaningfulness, and feedback received.

- *Flexible working arrangements*—According to the literature and interviews with companies, IT professionals want flexible work arrangements. Organizations can provide flexible work arrangements through telecommuting, flex-time, family-friendly benefits, and family-friendly HR policies. All of the companies interviewed use flex-time and telecommuting, and all of the companies agree that these approaches are important for retaining IT professionals. Two of the companies are beginning to use concierge services to reduce the pressure on employees who are working long hours or traveling frequently. In both cases, it is too soon to measure the impact of this benefit.

- *Training and development*—The January 2000 Watson Wyatt study found that maintaining their professional reputation is the number one factor in motivating top IT professionals. In fact, virtually all of the literature agrees that training, development, maintaining/enhancing skills, and other forms of growing and keeping current are very important to IT professionals. Interviews with the benchmarked companies confirm this. Even though the companies recognize that training and development are crucial, none of the companies consider that they do a good job in this. Among the changes one CIO of a larger defense contractor stated that he would make is to provide more training, including a "very defined metric" to which management must adhere, with five to ten percent of the manager's bonus tied to accomplishing this. Another CIO, from the insurance industry, stated that "skills base-building" is one of two changes he would make to the company's HR programs.

The Role of Benefits

Benefits do not seem to play a major role in attracting and retaining IT professionals except for when an organization's benefits are well below the industry average. Some interesting findings, though, do emerge. One is that benefits today average 40 to 50 percent of payroll, up from 30 percent a decade ago. Another is that the number of benefits offered (versus the total value of the benefits) is highly correlated to benefits satisfaction.

One of the benchmarked banking companies noted that benefits are one among four major factors that enable the company to attract and retain qualified IT professionals (the other three being culture/environment, flexibility, and pay). This interviewee mentioned family care days in addition to vacation and a generous 401K and pension plan as useful elements of the company's benefits package. Interviewees from two companies offer another benefit that costs little or nothing. They allow—and even encourage—employees to take equipment home. They explain that they have excess equipment, or that they get lots of demo equipment from vendors, and they offer it to their IT professionals to take home and try out. In both cases, the interviewees explained that there are two advantages to this: the employee gets to try out new things, and the company gets work accomplished on the employee's own time.

Advantages of the Private Sector

Private sector companies have many advantages over the public and non-profit categories included in this research. Offerings of stock options and stock grants, pay above the market, paid time-off and more lucrative signing bonuses are just some of the benefits that private industry can use. These additional tools for recruiting and retaining IT workers, especially those with highly specialized or "hot" skills, are placing the public sector at a real disadvantage in competing for the same people. In addition to these pay differences, the public sector suffers from a poor image of what it is like to work in the public sector. This perception, whether right or wrong, is supported by numerous surveys and reports. The lengthy hiring processes and civil service bureaucratic rules do nothing to dismiss or diminish this perception.

Another difference between private sector companies and their public sector counterpart centers around basic compensation philosophies. The private sector has moved away from a centralized, one-size-fits-all approach including the traditional, internal-equity based pay and reward systems that benchmark market averages. Current compensation practices in private industry tend to emphasize pay-for-performance and external competitiveness over internal equity. Major changes in reward design focus on paying for individual competencies versus jobs and moving from a commodity view to one of investment. The public sector (federal, state and local governments) continues to base compensation structures on labor market surveys with little room for individual or occupational fluctuation. Special salary rates for targeted occupations are only implemented after lengthy political and administrative negotiations - to the point that, by the time they are established, the data on which they are based may be no longer valid. The information technology occupation is changing so rapidly that this type of compensation approach is reactive and too little too late.

Attached to this testimony are several charts that identify certain private sector best practices, compare practices among private sector companies, and identify the job benefits that matter most to IT employees.

The research done by the Academy demonstrates that public and private sector IT organizations that compete successfully in the market have human resource management systems that:

- Provide pay within a competitive range
- Base compensation increases on contribution and performance
- Provide a flexible classification and compensation system
- Establishes a strategic balance between internal, external and contribution equity

- Provide challenging work assignments
- Provide opportunities for career advancement and professional growth
- Balance work and other aspects of life
- Provide the opportunity for continuous learning for managers and employees

Mr. Chairman, as I was working with your staff to prepare for this hearing, I learned of the "Information Technology Executive Exchange Act of 2001" which you have just introduced. While the Academy has not studied the Bill, I'd like to comment on it from my own perspective of a former government official and a company CEO. I applaud your initiative and think that it represents an important step forward. Moreover, it recognizes a fundamental truth of high technology staffing for government today. Increasingly, we will find that we can't and often don't want to hire a high tech worker for a whole career. Changes in government needs and people's skills make it harder to do that. It is vital that government is open to relatively short-term employment of people with vital skills whose career primarily exists somewhere else. I'll be happy to answer questions later on these points.

In summary, Mr. Chairman, information technology has the power to transform the level, quality and quantity of government services provided to American citizens. To realize this goal the federal government must have the tools needed to win the "war for talent." The tools in the current system are not adequate for the job before us.

Attachments: Information found in NAPA's Comparative Study of Information Technology Pay Systems Research Report
Phase I (February 2001)

Innovative Practices-Private Sector
The CEO of a large banking company explained that they used long distance telecommuting for a number of "highly desirable," experienced IT professionals who lived in locations far away from any of the company's offices.
A large defense contractor has implemented a "Reverse Mentoring" program, where a junior IT professional works with a senior leader in the company and provides guidance to the senior leader on how to use technology tools. Usually, the IT professional and leader are paired up for nine to 12 months. The company has seen very positive results so far. For example, in one case the junior IT professional showed a manager how to get information from the Internet about the competition. The senior manager was so impressed he made it a part of the regular responsibilities of his full time staff.
The CIO of an IT consulting firm explains their innovative twist to their referral bonus program. In addition to paying referring employees from between $300 and $1,200 (with the amount based on level of experience of new hire), every quarter all employees who have successfully made a referral are entered into a contest for a prize like a night out or a piece of equipment. In addition, at the end of the year anyone who has made a referral is entered in a lottery for a prize drawing. Last year the top end-of-the-year prize was $50,000. Last year, this company hired 40 percent of their new employees through their referral bonus program.
One large defense contractor sponsors more and more training on-line. In the latest year, the company sponsored 700 different courses online. They purchase the courses from training and educational organizations. Employees and their family members can take any course they want, all of it on the employee's own time. Courses include those that are job-related and those that are not. The company says that it costs them almost nothing.

Innovative Practices
Private Sector

	Large Defense Contractor Company A	Large Defense Contractor Company B	Bank Company C	Insurance Company D	IT Consulting Company E	IT Products Company F
IT Compensation System Separate? (Y/N)	N	N	N	N	N	N
COMPENSATION SYSTEM						
Market Based	X	X	X	X	X	X
Broad Pay Bands	X	X	X	X	X	Varies
Regular Merit Increase	X	X	X		X	X
Regular COLA						
Number of Times per Year Survey Salaries	1	1	1	1	2	1
SUPPLEMENTS TO BASE PAY						
Signing Bonus	X	X	X	X	X	
Retention Bonus	X		X		X	
Referral Bonus	X	X	X	X	X	
On-the-spot Awards		X	X	X	X	
Hot skills premium					X	
Paid OT	X					X
Variable/At-Risk Pay		X				
Stock Options						

QUALITY OF LIFE FEATURES						
Telecommuting	X		X	X	X	X
Flexible Schedule	X	X	X	X	X	X
Special Projects						
Paid Time Off						X
Concierge Service	X	X		X		X
Dependent Care	X	X	X			X
RECRUITING						
Developing a Brand Name	X		X	X	X	X
Involve IT Professionals	X	X	X	X	X	X
Reduce Recruiting Time	X					

JOB BENEFITS THAT MATTER MOST TO IT STAFF AND MANAGERS

Benefit	**Importance to IT Staff**	**Importance to IT Managers**
Challenge of Job, Responsibility	90%	85%
Job Atmosphere	80%	80%
Base Pay	82%	78%
Seeing Role With Org Goals	58%	76%
Benefits	78%	74%
Job Stability	74%	76%
Financial Stability of Company	64%	69%
Immediate Supervisor's Effectiveness	60%	61%
Understanding Company's Business *Strategy*	38%	61%
Potential for Promotion	63%	59%
Corporate Culture	42%	58%
Bonus Opportunities	44%	52%
Educational Opportunities	70%	51%
Flexible Work Schedule	62%	51%

Source: "InformationWeek", April 26, 1999
Rounded percentages of respondents to the survey indicating benefit is of importance

Mr. TOM DAVIS OF VIRGINIA. Thank you. Dr. Volgenau.

Mr. VOLGENAU. Mr. Chairman, as CEO of SRA International, we are very familiar with the problems of the information technology shortage. We are a system integration and consulting firm in the area of information technology and we understand the problem quite well.

I also have a second job, which is chairman of the Information Technology Association of America Work Force and Education Committee. ITAA represents 500 companies in its membership and works very hard to solve work force and other IT problems. Each year, we have an annual information technology work force convocation. We bring together government, academia and business to discuss work force issues.

In addition to that, we have partnerships and grants with various government organizations that look at such subjects as how to make education and training more relevant to the workplace and how to employ more people with disabilities and minority members.

In January, ITAA completed a study, which is one of a continuing set of studies that we have had of the work force. We found there are more than 10 million IT workers in the United States, and that this year, 2001, there will be a demand for 900,000 workers. In addition to that, the projected shortfall at that time was about half that number, 425,000 workers.

Now these figures are dynamic. If we were to take that survey today, it might be a smaller figure of openings. Nevertheless, we believe that there is a shortage of supply compared to demand.

I've been in information technology for about 40 years and I have seen it grow almost continuously.

Recently, ITAA completed its 11th annual survey of Chief Information Officers of the Federal Government. They all cited the concern that other speakers have made about the large number of Federal employees who can retire in the next few years, and they all cited competition with the private sector as far as recruiting and retention. Government can alleviate some of this shortage through outsourcing, which is an increasing practice, even in the private sector. But even with outsourcing, government still needs people to manage the contracts, and there are certain government jobs that simply don't lend themselves to outsourcing.

Government should, as other speakers have said, use some of the practices of the private sector in terms of attracting and retaining workers.

ITAA supports the Information Technology Executive Exchange Program. As a matter of fact, we attempted an exchange program in 1999 with the Department of Justice, and that concerned the Cyber Citizen Program. After fairly extensive discussions, we abandoned that program for a variety of reasons. Nevertheless, the objections to that exchange program we feel are surmountable. ITAA and its member companies want to work with the government to deal with this problem, and we look forward to working with this committee to help you do that.

Thank you very much.

[The prepared statement of Mr. Volgenau follows:]

ITAA

Testimony of Dr. Ernst Volgenau
President and CEO, SRA International, Inc.

Before the U.S. House of Representatives
Committee on Government Reform
Subcommittee on Technology and Procurement Policy

July 31, 2001

The Federal Information Technology Workforce

Introduction

Mr. Chairman, I am Ernst Volgenau, President and CEO of SRA International, a company I founded in 1978. SRA is an information technology consulting and system integration firm that provides services and software to business and government organizations. We employ about 1,800 people.

For the past three years, I have been Chairman of the Workforce and Education Committee for the Information Technology Association of America (ITAA). ITAA represents more than 500 corporate members in the United States and is deeply involved in issues associated with the information technology workforce. ITAA members consistently tell me that worker recruitment and retention are among the most difficult tasks they face in business.

ITAA Efforts to Address the Technical Skills Gap

ITAA has many programs to help alleviate the workforce shortage. In addition to important research, we host an annual Information Technology Workforce Convocation that brings together three main stakeholders - industry, government, and academia - to discuss solutions and encourage partnerships. We also cooperate with government and non-profit entities on various programs designed to train workers in IT skills. Here are a few examples:

- Implementing a nationwide program of partnerships between industry and academia to discuss ways of making education more relevant to the work place. This effort is funded by the National School-to-Work Office in a partnership with the National Alliance of Business and the Education

Development Center, which is a non-profit organization that addresses K-12 and higher education issues.

- Training and placing people with disabilities in IT jobs through a U.S. Department of Labor grant, in partnership with Community Options, Inc.
- Providing internship opportunities in leading companies to talented minority students through the Digital Opportunity Initiative.
- Partnering with the U.S. Department of Labor to bring together high tech employers and regional Workforce Investment Boards to address critical training and retraining needs for workers.
- Assisting Community Technology Centers to provide Internet access to urban and rural citizens across the country. This effort is called the America Connects Consortium and is funded under a grant from the U.S. Department of Education.

In addition, ITAA helps create long-term improvements in education, for example, better math and science education in K-12, teacher training and accountability, and testing. We also support short-term solutions like increasing H1-B visa caps for foreign guest workers.

The IT Workforce Shortage

This spring, ITAA continued a tradition of providing rigorous research concerning the need for skilled IT workers. Our latest study (released in April) is called *When Can You Start? Building Information Technology Skills and Careers.* The study is built on work of previous years concerning the size of the IT workforce and the needs for highly skilled workers.

The study results are based on a random sample of 685 hiring managers, both inside and outside the IT industry, through a telephone survey conducted in January 2001. We found that the U.S. information technology workforce is 10.4 million people. Our study also concluded that non-IT companies employ ten times more IT workers than do IT companies – about 9.5 million versus 900,000.

The projected demand for new workers in 2001 is approximately 900,000. This number is about 45% of the demand that existed last year but is still significant. While the demand is lower, the IT talent gap remains large. Hiring managers predict a shortfall of 425,000 skilled workers this year – roughly half of last year's shortage. The decrease in the shortfall is due to the downswing in the overall US economy. Keep in mind that these figures are dynamic; a survey today might show a smaller shortage of IT workers. Nevertheless, we remain convinced that the demand for IT workers continues to exceed the supply.

The Shortage in the Federal Government

There is ample evidence of a critical shortage of IT workers in the federal government, which has even more difficulty than the private sector in recruiting and retaining skilled workers. ITAA recently conducted its 11th annual survey of federal CIOs called *The New Federal Agenda: Point, Click, Change!* Federal CIOs describe an aging workforce and other problems. According to a report issued by the National Research Council last year, about half of federal IT workers will be eligible to retire in the next decade.

Compounding this problem is the difficulty many agencies have in recruiting and retaining junior staff members. The federal government clearly has a disadvantage compared to the private sector. Commercial companies often offer appealing incentives like stock options, bonuses, and high salaries. The federal CIOs also cited shortcomings in the federal personnel management system as a hindrance to developing the IT workforce along with the lack of flexibility and an inability to weed out poor performers.

The government can alleviate this shortage through outsourcing, which is a practice that is increasingly used in the private sector. However, even with outsourcing, the government will still need people who have education and experience in information technology to oversee these contracts and to perform certain jobs that are not suitable for outsourcing.

Using Recruitment and Retention Techniques from the Private Sector

The federal government should consider using recruitment and retention tools from the private sector, and these tools may help overcome pay inequities and other disincentives, perceived or real, to joining the government IT workforce. Here are a few examples:

- Internship programs, bonus systems, and flexible work hours are all perks that government should offer its IT employees.

- On-the-job training and other forms of education to keep IT skills current.

- A pay schedule that brings salaries more in line with the private sector.

- A good telecommuting program for IT workers.

IT Workforce Exchange Program

ITAA supports the concept of an information technology executive exchange program. Indeed, the idea is strongly aligned with our belief that public-private partnerships can help bridge the technology skills gap. In fact, ITAA attempted to implement a personnel exchange program between our industry and the Department of Justice (DOJ).

A Cybercitizen Personnel Exchange program was investigated in the summer of 1999, as part of a joint ITAA – DOJ program to share information and develop an awareness campaign around information security issues. The exchange was intended to bring law enforcement and the IT industry together to understand the challenges and processes undertaken by each in combating cyber crime.

However, the Cyber Citizen Exchange Program was not implemented. After more than a year of dialogue, the program was abandoned because of the following concerns:

- Exchange personnel might be classified as "gifts" and thus violate federal gift bans.
- Questions of pay inequity exist.
- Government workers might depart for better paying private sector jobs.
- Reluctance of both industry and government organizations to temporarily lose a valued IT worker.
- Perception of unfair advantage, particularly when industry participants are contractors for the Federal government.
- Security clearance issues exist for certain government IT jobs.

In our view, all of these concerns are surmountable. In fact, several federal agencies have in the past implemented successful exchange programs.

ITAA and many of its member companies want to partner with the government to solve high tech workforce concerns. Our mutual interests are best served if there are well-trained, experienced and competent federal information technology professionals. ITAA looks forward to working with this Committee to ensure that this becomes a reality.

Thank you. I shall be happy to answer questions.

Mr. TOM DAVIS OF VIRGINIA. Thank you very much. Mr. Rohleder, thank you for being here.

Mr. ROHLEDER. Chairman Davis, thank you for inviting me to testify today on the Federal human capital crises.

I would like to ask that my full testimony be submitted for the record, please.

I am Steve Rohleder, the managing partner of Accenture's U.S. Government Practice. Accenture is the world's leading provider of management and technology consulting services and solutions. We employ more than 75,000 employees in 46 countries, generating $9¾ billion in revenue in year 2000. We employ about 2,500 people in RST, and the majority of which work in our U.S. Government practice.

Today my testimony will focus briefly on the impact the technology work force shortage has had on the ability of agencies to develop effective solutions to improve taxpayer services and highlight three areas where I believe the private sector can help address government's human capital challenges.

The shortage of high-tech workers over the past decade is legend. That shortage has had a disproportionate effect on the Federal Government, which has been unable to compete with the private sector for these critical, new-age workers. The impact on government's ability to manage its $44 billion annual IT investment has been profound. There's a shortage of highly skilled managers to oversee complex IT programs. There is a severe shortage of IT professionals with cutting edge Internet-based skills. And the IT work force has not been able to fully harness the power of technology to save taxpayers billions of dollars while improving efficiency.

One solution we support is the establishment of a Digital TechCorps. It would allow public IT middle-level managers to be loaned to the private sector and, conversely, the commercial IT managers to be loaned to government for 1 to 2 years. Accenture believes that a Digital TechCorps comprised of the best and the brightest of both government and industry can be funneled toward projects that will help transform the Federal Government into a 21st century government.

Accenture applauds the legislation you've drafted, Chairman Davis, and believe it will pave the way toward helping address the human capital crises by committing managerial high-tech talent to unique e-government challenges. It will also serve as a model from government and private sector collaboration. It will break the paradigm whereby entry to government service generally takes place only at the entry level and very senior levels with very little entry at the mid-career.

And finally, it will serve as a final step to reinvigorating a culture of public service for a whole new generation of technology managerial workers.

There are three areas I believe the private sector can help.

First, Accenture has committed to loan five of our best and brightest to the Digital TechCorps for the first 2 years as soon as the legislation is passed and will challenge others in our industry to match our offer. We would hope that the initial TechCorps would be comprised of government and industry professionals dedicated to working on cross-agency e-government initiatives at the direction and in collaboration with the Office of Management and Budget and the Chief Information Officer Council.

Second, there are many innovative human resource management best practices that government can and should adopt from world class private sector organizations. In our written testimony, we have offered some innovative solutions on how an organization can assess their work force, prioritize their risks and then mitigate them.

Specifically, we believe agencies and Congress should review strategies to preserve the brain trust, embrace talent management and deployment, develop the next generation of Federal servants and achieve operational excellence.

Third, as Federal agencies begin developing their human capital management assessments and mitigation strategies, it will be apparent that they do not have the tools to adequately track, manage and assess progress in aligning their human capital with their organizational mission. Human resource technology can enhance the quality of performance evaluation, skill tracking, training, knowledge transfer in recruiting and retention efforts.

In conclusion, consistent with Mr. Walker and Mr. Perry's testimony, we believe the private sector can play an integral role in helping the Federal Government reshape its work force for the 21st century. Accenture is committed to helping launch a government-industry Digital TechCorps fostering a knowledge exchange beneficial to both industry and government.

There are numerous human resource management commercial best practices that can and should be adapted to the Federal Government. Some will need legislation. Others need only be implemented.

Finally, Accenture recommends that Congress continue to urge agencies to utilize technology to help manage the Federal Government's most precious asset, its people.

Thank you.

[The prepared statement of Mr. Rohleder follows:]

accenture

TESTIMONY OF

STEPHEN J. ROHLEDER
MANAGING PARTNER, USA GOVERNMENT

ACCENTURE

ON THE HUMAN CAPITAL CRISIS

BEFORE

THE TECHNOLOGY AND PROCUREMENT SUBCOMMITTEE OF
THE
HOUSE GOVERNMENT REFORM COMMITTEE

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Testimony of

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Chairman Davis and members of the subcommittee, I am Stephen J. Rohleder, the managing partner of the USA Government Market Unit of Accenture, the world's leading provider of management and technology consulting services and solutions. Accenture employs more than 75,000 employees in 46 countries who deliver a wide range of specialized capabilities and solutions to clients across all industries, generating $9.75 billion in revenue before reimbursements for the year ended August 31, 2000. Our USA Government Market Unit is dedicated to assisting local, state, and federal governments maximize the benefits of technology and modern management practices. We have a Human Capital Practice focused on assisting governments assess their workforce and develop strategies/plans to mitigate workforce risks.

In addition, Accenture prides itself as being one of the leading corporate "best places to work." Last year, Accenture recruited 17,000 new people into our organization and spent six percent of our revenues on training our people worldwide. We consider a highly motivated, skilled workforce the most critical component to our success and that of our world-class business clients.

INTRODUCTION

Thank you for inviting me to testify today on the impending Federal Government human capital crisis and the role the information technology industry can play in helping alleviate it.

I would like to commend you, Congressman Davis, for focusing on this critical management challenge and applaud Comptroller General David Walker for his tremendous leadership in highlighting the magnitude of the Federal human capital crisis. There is no question that the Federal Government faces several major challenges in the next several years:

- Severe shortages of workers as approximately 50 percent of its workforce becomes eligible for retirement;
- Increased competition from the private sector for the nation's most skilled workers;
- Inflexible hiring and work rules that place the Federal government at a disadvantage to compete with world-class companies for entry-level college graduates and specialty skilled workers; and,
- An industrial-age based human resource system that does not meet the challenges of a knowledge-based society.

My testimony today will focus briefly on the impact the technology workforce shortage has had on the ability of agencies to develop effective solutions to improve taxpayer services. Then, I will discuss three areas where I believe the private sector can help government address its human capital challenges, especially those impacting the information technology workforce.

- The private sector can play a role in encouraging young IT workers to serve in government for some period during their career to foster knowledge transfer between government and industry. Accenture today announced our commitment to help establish a public-private Digital TechCorps, which will allow the exchange of government and industry IT professionals. This exchange will accelerate government performance and efficiencies.

- There are many lessons to be learned from world-class private sector organizations on how the Government can assess, prioritize and mitigate its human capital risks

- The Federal Government should embrace human capital technology tools more effectively.

I. The Shortage of IT Workers Is Having a Severe Impact on Government

The shortage of IT workers and the aging of the Federal Workforce have had a disproportionate effect on the Federal Government over the past decade. The Federal Government has not been able to compete for the best and brightest high tech workers for a number of reasons, including: salaries, the long period of time it takes to recruit into the Federal Government, and a lack of commitment to training and innovative human capital management tools. The Federal Government, rightly or wrongly, has not been considered a "best place to work" for IT workers, who tend to seek environments that foster innovation and provide ongoing opportunities to learn new skills.

The impact of these challenges on the Federal Government have been many:

- There is a shortage of highly-skilled managers to oversee the most complex IT modernization programs, contributing to some of the failures we have seen in the past decade.
- There simply aren't enough people to maintain current systems, forcing government to contract out and outsource more and more IT functions. This is not unique to government, just more severe.
- Government has not been able to attract the talent it needs to lead the government to deliver services easily and electronically.
- The IT workforce has not been able to harness the power of technology to save improve efficiency and save billions of dollars at the pace we've seen in the private sector.

We do not underestimate the complex challenges of transforming the U.S. Government's IT infrastructure. The Federal Government is bigger and more complex than any client we have. This is why Government must commit itself to attracting the best and brightest to help manage, transform and bring best practices to these complex challenges. The Federal Government spends more than $44 billion annually on IT. If well managed, that investment will save billions of dollars, while providing much more efficient services.

II. A Digital TechCorps Can Help Revitalize Public Service and Fill Skills Gaps

Earlier today, Accenture announced along with Congressman Davis our company's commitment to help launch a Federal Government " Digital TechCorps," a public-private exchange dedicated to enhancing the esteem and prestige of the Federal Government IT workforce. We believe that a Digital TechCorps, comprised of the best and brightest from both government and industry, can help transform the Federal Government into a 21st Century Government. Accenture applauds the Ditigal TechCorps Act, which will create the framework for such an exchange.

The Digital TechCorps is aimed at helping the Federal Government harness the power of technology to allow citizens to conduct government business 24 hours a day, seven days a week, by phone, computer, kiosk or other convenient means. Accenture would anticipate that the Digital TechCorps would begin with at least 25 public and private information technology managers, working together, and would grow rapidly as needed.

As proposed, Digital TechCorps loaned executives would work in conjunction with the Office of Management and Budget, the Chief Information Officer Council and senior agency executives to tackle government's most pressing IT challenges. We would hope that the early Digital TechCorps personnel could be dedicated to helping Government develop cross-agency, Internet-based services. Industry would loan for one to two years high tech managers to work side-by-side with government IT managers on loan from their respective agencies. Their mission would be to focus on assisting OMB, the CIO Council and senior agency executives develop the vision and strategic plans for "whole of government" digital solutions, such as:

- Migrating traditionally paper-based and face-to-face services to the Internet and other digital means.
- Breaking down the silo mentality of government to provide one-stop services for citizens.
- Enabling citizens not only to access government information through the Internet, but also allowing them to transact business anytime, anywhere.
- Linking Federal Government services to those of states and localities.

- Developing tools and strategies to ensure computer security and to tackle challenging IT programs.

In addition, legislation would allow government IT managers to be loaned to industry for one to two years, allowing for important knowledge transfer and unique commercial experiences that can be applied when workers return to their agencies. We believe the Digital TechCorps will help the Federal Government:

- Address the human capital crisis by committing managerial high tech talent to unique eGovernment challenges.
- Serve as a model for government and private sector collaboration to generate intra-agency eGovernment innovation.
- Break the "paradigm," whereby entry to government service generally takes place only at the entry level and very senior levels, with very little entry at mid-career, and,
- Serve as a first step toward restoring a culture of public service for a whole new generation of technology managerial workers.

As proposed, legislation will allow industry mid-level managers to remain on their company payrolls while dedicating themselves to public service for one to two years working on challenging digital government assignments. Loaned managers will be held to the same ethical standards as any other government employee, as well as post-employment restrictions. Conversely, government employees can be loaned to industry for one to two years.

Accenture has committed to loan five of our mid-level managers to the Digital TechCorps for each of the first two years, and will challenge others in our industry to support the program as well. We believe strongly that both industry and government would benefit from such a collaborative Digital TechCorps effort. And we hope it will go a long way in restoring esteem to public service, a calling we highly regard.

III. Government Should Adopt Commercial Best Practices to Help Assess Prioritize and Mitigate Its Human Capital Risks

A second area where industry can assist the Federal Government is in sharing human capital management best practices. If the Federal Government wants to provide world-class services to its citizens, it should create a culture where public service is one of the most appealing career opportunities in this country. Specifically, leading companies exhibit these common traits that establish the culture for a world-class workforce:

- A commitment from the top leadership to making "people" an integral part of an organization's mission.
- A commitment to regularly assess the human capital challenges within the organization. It is a dynamic and ongoing process.
- Commitment to implement changes to meet the most critical human resource challenges, whether they be recruiting, retaining talent or constantly upgrading skills.
- A culture of empowering the employees.
- Adoption of appropriate commercial human resource practices.

The Office of Management and Budget's Directive on Workforce Planning and Restructuring issued May 8, 2001, serves as an important first step in energizing Federal agencies to think of their workforce as a critical component of delivering mission-critical services. The Directive requires agencies to do two things: a) Submit a summary of their agency workforce analysis to OMB by June 29, 2001; b) develop a restructuring plan based on the workforce analysis, as part of its FY2003 budget submission and annual performance plans.

While a handful of agencies submitted a workforce analysis by the required deadline, many did not. Most agencies simply do not have the tools and knowledge to complete a serious and meaningful workforce assessment. And as challenging as this task is, OMB's requirements for developing a Restructuring plan are even more daunting.

The suggestions listed below could help the Federal Government take advantage of some of the innovative human capital solutions our "best clients" are adopting. They provide a high level view on assessing the workforce; prioritizing the risks according to mission critical priorities and offer some innovative solutions.

First Step: Assess the Workforce

An assessment is a management tool that organizations utilize to provide a high-level picture that an organization can utilize to determine the strengths and limitations of its human capital systems. It evaluates key data such as:

- Critical competency and skills gaps
- Number of employees eligible to retire and the functions they performance criticality of those functions to achievement of mission;
- Employee retention
- Integration of human capital into the agency's core business planning
- Recruitment rates and average time to fill vacancies
- Executive views of the current and desired work cultures

Data from these assessments will help agencies prioritize risks and develop the business case for implementing risk mitigation factors.

Second Step: Prioritize the Risks

Different agencies will have different risks. They should prioritize those risks and focus on fixing those risks that threaten their mission achievement. Four key areas that we believe government can begin to evaluate for mitigation solutions include:

- Preserving the Brain Trust
- Embracing Talent Management and Deployment
- Developing the Next Generation of Federal Civil Servants
- Achieving Operational Excellence

Eventually, Congress may want to consider broad-sweeping civil service reform. While some of these solutions will require legislative action, others merely require bold thinking, planning and execution.

Third Step: Mitigate the Risks

Depending on the workforce composition of a particular agency, human resource managers may want to consider some of these innovative solutions. Accenture does not recommend that all of them be implemented simultaneously, but rather be considered as solutions to specific pressing challenges. Government should have an overall strategy to preserve the brain trust, embrace talent management and development, develop the next generation of civil servants and achieve operational excellence.

Preserve the Brain Trust

Under the present system, the Federal Government is facing an unprecedented "brain drain" with those impending retirements. At the present time, the Federal Retirement system does not allow for partial or part-time retirements. As a way to help ease the brain drain from the potential waves of retirements, the Government consider adopting:

- A "flexible retirement" system, allowing workers who retire to continue to work for the government on a part-time basis;
- Reverse Apprenticeships, allowing older workers to learn new technology skills or other skills in short supply within the government from highly-skilled, younger workers; and
- Increase the number of non-career and limited appointments.

Embrace Talent Management and Development

The Federal Government should address three issues, which are impediments to developing and keeping talent: limited career advancement; talent mobility; and flexibility in hiring the right people in short time periods.

To solve these challenges, some solutions include:

- The Federal Government should provide access to jobs, multiple career fields and advancement opportunities. Accenture research has revealed that organizations that make it easier for employees to find and take on new opportunities within the organization are better at enhancing employee performance.

- Create mobile talent teams. Allow employees who enjoy taking on new challenges and thrive in a constantly changing environment to have a unique professional career path in government. Teams who can take on the challenge, for instance, of being able to implement large systems projects might be shifted from one large challenge to the next.

- Expand the use of Talent Networks and Talent Exchanges. Talent Networks, by their nature can be pulled together quickly, usually at the same time a strategy is defined, so that execution can begin immediately. The networks are built from a variety of sources, such as contingent, part-time or contract individuals, suppliers and customers. These networks are not meant to replace government workers, but to quickly supplement them when critical skills and abilities are not immediately available.

Develop the Next Generation of Federal Civil Servants

The lengthy hiring process for Federal Government jobs places the Government at a distinct disadvantage in attracting key talent. The current application process for new workers is extremely cumbersome, complex, bewildering and slow. While Accenture is able to recruit and hire great applicants within weeks, the Federal Government often takes four to 16 months to offer college graduates jobs. Too many times, they lose the best candidates to those employers who are prepared to make prompt offers. We recommend that the Government:

- Develop an eGovernment Job Application Portal for the Federal Government that would distribute candidates through a matching process throughout government.

- Create automatic referrals of all candidates rated as highly qualified to other agencies or to and OPM Job bank accessible to all agencies.

- Provide authority for more prompt college campus hiring.

- Establish scientific and professional positions outside the General Schedule without competitive exam requirements.

Equally, if not more important, the Federal Government should focus on retention of top talent. Talent retention has risen to the top of many organizations' agenda as companies recognize that people are the source of competitive advantage. The Federal Government must:

- Invest in employee development and training. Agency budgets must fund training to allow rotational assignments and focused career-enhancing training on an ongoing basis.
- Create talent networks. Providing employees with a continuous learning environment and exciting new opportunities to take on challenging assignments can greatly enhance retention rates. One approach to the creation of "talent networks" is to tap a wide range of including outside experts.

Achieve Operational Excellence

Many government agencies have piloted broad-banding pay for performance structures. But the Federal Government still lags the private sector in rewarding top performers who help agencies achieve their organizations' goals. We believe the government should require performance evaluation results to tie into bonus payouts and promotional eligibility. Agencies should use technology that drills down the Government Performance and Results Act goals and balanced Scorecard objectives to the department level, then to the employee level.

IV. Government Should Utilize Technology to Improve its Human Capital Management

Third, the Federal Government currently lags world-class companies in utilizing technology to better manage its human resources. Technology can enhance the quality of performance evaluations, skills tracking, training, knowledge transfer, and recruiting and retention efforts. It can be harnessed to more effectively administer benefit plans for both the Federal Government and its employees. We believe that the range of human resource technology tools available can tremendously help the government manage its human capital challenges.

CONCLUSION

The private sector has an immense stake in the Federal Government successfully tackling the impending human capital crisis. To that end, we are committed to helping launch a government-industry Digital TechCorps that we hope will be a model for other such collaborative knowledge-sharing ventures. Accenture would welcome the opportunity to work with Congress and the Administration to share what we believe are valuable commercial human capital best practices that are equally applicable to the Federal Government. Finally, we urge Congress to support and encourage agencies to harness technology to better administer their human capital challenges.

Mr. TOM DAVIS OF VIRGINIA. Thank you all very much. Let me start, Mr. Faga, with you.

Does MITRE, being an FFRDC, have constraints on its hiring and the way it can remunerate people through other government contractors? You can't do stock options because you are not a stock company.

Mr. FAGA. We have to attract people basically purely on salary and opportunity to serve the public service, which by the way, proves to be a very important incentive. Because of those limitations, though, a year ago our attrition rate was running about 12 to 14 percent. Right now, it's running 5.

Mr. TOM DAVIS OF VIRGINIA. The tightening job market also helped that, you think?

Mr. FAGA. Absolutely. And employees who are staying are talking about now the stability of the work as opposed to the attraction of going for the brass ring.

Mr. TOM DAVIS OF VIRGINIA. Sure. I was intrigued when you talked about good managers making a big difference. We lose a lot of people because they are managed badly and go out. I think this can help with that. But most of all is making this challenging work, giving people an opportunity to step outside of government for a year or two and see what it is like there, learn new innovative techniques as part of a career path in government.

Mr. FAGA. Let me say just one more word about the idea of challenging work. One of the things I found, having been in government and also at MITRE, the challenge is to some degree self-generated by a group and there needs to be a critical mass of people. For example, in the field of information security engineering, we have about 200 technical people. They work on projects throughout the company. If they did not stay together as a mass—doesn't have to be as large as 200, but it can't be one and two. And one of the problems that you see in government is having—trying to hire 1 or 2 people who are specialists in a field and then hope that they would stay current and productive in that field for many years. Cannot be done.

That's one of the beauties of your TechCorps is—I mean, we have all kinds of people, and I'm sure that my colleagues do, too, who would love the opportunity to spend a couple of years right inside of government helping with problems they think are important.

And I might add further, Mr. Chairman, there is a related program called the Intergovernmental Personnel Act Program, which allows the government to exchange and nonprofits like us to contribute. We have about 12 people in those assignments now. This does not supplant what you are doing. It doesn't meet the need, but it does prove that it can work because it is already working in a small scale way.

Mr. TOM DAVIS OF VIRGINIA. Dr. Kelman, I have a question for you. You noted in your testimony that one-third of your graduating professionals are interested in entering the government work force, which is down, and I ask if that means you are letting more Republicans into Harvard.

Mr. KELMAN. Many Republicans go to work for the government, especially now.

Mr. TOM DAVIS OF VIRGINIA. What type of career paths are they interested in? What are they doing instead of government?

Mr. KELMAN. We still, even now, we have 70 percent of our graduates going into what I would call some version of public service broadly conceived. So this is ballpark. We have about 35 percent go into government, about 25 percent go into nonprofit and about 20 percent go into the public sector divisions of private sector firms. They might work for the public sector division of Accenture or another firm. So we still got around 70 percent going into public service of one sort or another. And we consider that, broadly speaking, part of our mission.

But we agree with the statement that you made and a number of the statements witnesses have made earlier on, the government—there's public service that's not just government service. However, the government needs talented people.

So we want to make sure that a significant number of our people do go into government service. Now the ones who don't go in—and many of them, because we got concerned about these numbers—we do interviews both when they graduate—students who don't go into government—or we do interviews a few years out. Many, many of those who have not gone into government express an interest in an opportunity during their career or more than one opportunity to have a chance doing some public service, even if it's not their whole career. We need to make it more easy for people who don't want to devote a whole career in government and are not at the level of senior political appointees, assistant secretaries, whatever, to have some chance to do public service.

Mr. TOM DAVIS OF VIRGINIA. It seems, then, of your graduate pool, most of them aren't going in to make money. They are really going in to, like you said, nonprofits, other public sector areas for the mission. And our key is to give them a mission in government. So many times, it seems you go into government and there is no mission. It's regulation-driven.

Mr. KELMAN. And I think that, again, when we interview our students—and we are doing a lot of work on this because we are very concerned about this problem—I mean it's the center both to our commitment to public service and the mission of our institution—when we interview our students, a lot of them express—and I'm going to call it stereotypes because I don't think it is necessarily true across the board by any means—but a lot of them express a stereotype that if you go into government, it is not results driven, that it is filled with bureaucracy, red tape and regulations and so forth.

And there—and in early May, the fairly newly elected mayor of Baltimore, Mayor O'Malley, came to speak at the Kennedy School and talked about some of the things he's trying to do in Baltimore. He brought with him a bunch of overheads about—and he sort of sees his goals that there are about five or six performance measures for the city of Baltimore: Crime rate—he had a bunch of them. He's tracking them every week and brought along charts. And I happened to be in the audience and a number of my students came up to me and asked, can I go to work for this guy?

I think that young people, talented young people want challenging and results-driven work. And as I said in my testimony, anything that we can do as a government that you can do from your perch on this subcommittee to get the government workplace less bureaucratic, more results-driven, we couldn't do anything more to attract good Federal workers than that. That's the biggest thing we can do in a lot of ways.

Mr. TOM DAVIS OF VIRGINIA. Dr. Volgenau, let me ask a couple of questions. What are some of the benefits that you extend to your employees to get them to come there and to retain them—I guess many were constrained by going into government? And what could you offer us in government?

Mr. VOLGENAU. First of all, as other speakers have said, Mr. Chairman, the best thing that any organization, government or private, can offer its people is leadership and the inspiration that comes with good leadership.

In terms of financial incentives, we compensate our people better than the average in the private sector. We offer bonuses for good performance. And on top of that, we have stock options. We are a privately listed firm, but we have a provision where we're appraised by an independent outside company so people can, even in a company that is not publicly listed, can do very well in terms of stock options.

Mr. TOM DAVIS OF VIRGINIA. You are obviously a very highly-regarded company. Do you feel there would be managers and employees in your company who would welcome the chance to come into government for a year?

Mr. VOLGENAU. Yes, particularly if they felt they could really make a national contribution. Again and again, people are inspired by that. I'm a product of that system. The government sent me to the Naval Academy and then during the course of my military service for a Ph.D. in electrical engineering, and I ended up spending 20 years in the military and another 3 years in a senior position in Civil Service. And I felt for most of that time, even though the salaries were better for engineers, that the idea of national service and having real responsibility, the opportunity to make a contribution, caused me and many other people to stay. And I think that still holds today.

Mr. TOM DAVIS OF VIRGINIA. How often do you undertake a work force assessment of your organization to ensure that you are adequately meeting the needs of the changing marketplace? And what kind of attrition rate do you have?

Mr. VOLGENAU. Mr. Chairman, are you talking about my company as opposed to ITAA?

Mr. TOM DAVIS OF VIRGINIA. You can do both.

Mr. VOLGENAU. ITAA wouldn't have a formal——

Mr. TOM DAVIS OF VIRGINIA. So your company would be a good example.

Mr. VOLGENAU. I'll start with ITAA.

Mr. TOM DAVIS OF VIRGINIA. And you're here for them. That's fine.

Mr. VOLGENAU. We do an annual assessment. And it's very comprehensive and it includes not only openings, but skilled categories. And then every year, ITAA does an assessment—survey of Chief Information Officers in the government. From a company standpoint, we are continually assessing our competitiveness and we use many outside studies to make sure that our—particularly our executives are paid well. We pay our people in the 75 percentile in terms of cash compensation. And when it comes to stock option, we are up in the 90 percent. But for that, we demand performance. If they are going to be paid at the 75 percentile, then our company must perform at the 75 percentile and they individually must perform at that rate.

Mr. TOM DAVIS OF VIRGINIA. You note that the ITAA tried for a year to develop an information security work force exchange program. What kind of roadblocks and difficulties did they encounter?

Mr. VOLGENAU. Well, some of the things that the government speakers mentioned this morning, there was the concern about an exchange being perceived as a gift. There was the worry on the government side that people might, having gone to the private sector for a year or so, decide to stay there. Pay inequity was an issue. And then there was the concern that if those executives came from government contractors, that somehow or other those government contractors would have an advantage in competition compared to others. All of those items we feel are surmountable.

Mr. TOM DAVIS OF VIRGINIA. Sure. Thank you.

Mr. Rohleder, let me ask you a couple of questions. You mentioned 6 percent of Accenture's annual budget is spent on training. Do you know what it is in the Federal budget?

Mr. KELMAN. The best we have is about 1 percent.

Mr. TOM DAVIS OF VIRGINIA. Have you measured the results of your training to ensure that your employees are receiving the most up-to-date skills and how critical is that? This is a bell. We will go on for about 10 more minutes and then we will adjourn.

Mr. ROHLEDER. First of all, the training is absolutely critical. It's a fabric of the firm. We hire about 80 percent of our people right off of campus. Next to the Federal Government, we are the largest recruiter off of campuses in the United States. So training is an absolute critical component to a person's development with our firm. In fact, they've got a 5-year training program that they go through. And we manage and promote them based on that training and their performance on the job.

Mr. TOM DAVIS OF VIRGINIA. And for you, then, that is a recruitment tool, the fact that they are going to be constantly trained?

Mr. ROHLEDER. Absolutely. I think the people that we recruit see that as a differentiator for our firm. They see that training program and that commitment to development as a key component in their decision to come work for us.

Mr. TOM DAVIS OF VIRGINIA. I think one of the problems in government is that when budgets are cut, training is just one of the first things to go. And it's a demoralizer, but it also just puts us behind the 8 ball on so many different issues.

Mr. ROHLEDER. Especially in the technology area where technology is changing so often that you have to keep your skills current to be able to develop the solutions that are going to help you.

Mr. TOM DAVIS OF VIRGINIA. You note in your testimony that part of e-government is improving communications and service delivery between the Federal Government and State and local governments with whom they have to communicate. Would Accenture be interested in pursuing this type of an exchange program with State and local governments as well?

Mr. ROHLEDER. Yes, we would. In fact, I have had conversations already in California with the commissioner of the tax board out there. Interestingly enough, his point was he wasn't interested in information technology exchange, but auditors. So they were interested in going into a different direction, but the need is still there. I don't think the human capital crises is only an issue in Federal. You can see it happening in State and local governments as well.

Mr. TOM DAVIS OF VIRGINIA. Some of today's testimony noted that many agencies view legislative release from Title V as their only option for solving their hiring challenges. Many agencies view the application process for existing flexibilities as either burdensome or just too time-consuming. In your opinion, do agencies understand what hiring and recruitment and retention flexibilities are available to them now?

Mr. ROHLEDER. I think some do. I think you take some agencies that have been relieved from their Title V requirements and they have gotten a little bit more creative. Most, I think, are still caught in H.R. policies and practices in the last 10 years. And I don't think they really do understand.

Mr. TOM DAVIS OF VIRGINIA. Doctor, let me go back to you. A recent Computer News article stated that over 57 percent of government managers believe that information systems are critical to the agency's mission. In your experience, in and out of government, is the current IT work force shortage impacting the ability of government agencies to accomplish their missions?

Mr. KELMAN. Yeah. I think particularly—again, as Dave Walker and others have suggested—from a contract management perspective—and I think that—my own view is it doesn't make sense to say we need to keep a whole bunch of computer programmers in the government just so we can have people come up the system and be able to manage contractors. If it doesn't make sense to have the programmers in the government and it makes more sense to outsource them, we should outsource them. But we do definitely need IT—or skills of people who know something about IT to help establish strategy, requirements, evaluate RFPs, do contract management.

I think that we need to be—and again, I think a lot of those people can initially come in at the mid-career level and move up there. They can come in, you know, at an 11, 12, 13 level and work up from there. But I think that, as you mentioned earlier, we still have a big problem with failed IT projects in the government. And we just—yes, IT is crucial to the government's ability to serve citizens better and being able to manage IT at the front end of strategy and design and at the back end, of managing contractors, is a crucial, central skill for the government. And I think actually being able to manage—it's really a management issue, not doers, managers, executives, leaders. I think this is becoming a core competency for government to be able to manage those kinds of situations, and it hasn't got the attention it needs.

Mr. TOM DAVIS OF VIRGINIA. Let me ask each of the private sector reps. I mean the idea of coming in and working on a massive program at the governmental level that they may not be able to get for your company would have an appeal, wouldn't it? You get that kind of experience and then they can come in and it gives you—later on, it gives your company someone who has actually worked with a wide body. You probably get some of that when you hire people from the Federal Government already. But for a younger person to work on that level could be a great tool.

Mr. ROHLEDER. Absolutely.

Mr. TOM DAVIS OF VIRGINIA. Dr. Kelman, have you shared the concept of the Digital TechCorps with your students, and what's their reaction to this kind of thing?

Mr. KELMAN. I haven't shared this specific idea with the students. I was involved in a focus group with some 30 something Accenture employees on this and they were as a group—we did a focus group with eight of them. Seven of them said under the provision of your legislation, it was important that they continue to be able to maintain their association with their own firms and salaries. But with those conditions, they were very, very—seven out of the eight said they want to apply.

So Steve may have—you said the best and the brightest. You probably got a lot of people to pick among. I think it's interesting—if I could just tell another interesting story.

I have shared this with my colleagues back at Harvard. I went and saw a government team unit at Accenture, some new employees working in their Government Division, and they showed a little training film developed within Accenture for new employees in the Government Division. You know, it was interesting. The appeal to public service there and the flag and making a difference, I'm almost embarrassed to say, I think they did a greater job selling public service to their employees at Accenture than we a lot of times do in the government selling public service to our own employees.

Mr. TOM DAVIS OF VIRGINIA. Well, we forget the product we have sometimes when we do that. But I'll tell you, the last 10 years have been—20 years have been difficult for Federal employees with the downsizing and the benefit cuts and everything else. It's been very demoralizing. And I think when we can start recognizing employees as an asset instead of a line item to be cut and nibbled at, it just changes the whole perspective.

Mr. KELMAN. You know, Mr. Chairman, I mentioned this in my written testimony. One of the things that you could do and this subcommittee could do is why not hold a hearing every 6 months or even once a year, whatever, where you bring in career people in the government who have been involved in delivering some improvement and service through information technology and start sending the message that when career people are called before a committee like this, they are not just being called to be hectored; that every once in a while at least they are called to be honored because they deserve it. And that's a contribution that you could make and the subcommittee could make.

Mr. TOM DAVIS OF VIRGINIA. That would be a first.

Mr. KELMAN. Let's show we can break the mold.

Mr. TOM DAVIS OF VIRGINIA. We are long overdue. And I will take that under advisement. And that's a good idea.

Let me ask Dr. Faga. They have now changed some of the IT positions in government in terms of their salary that you and Ms. James have testified on that. Is that going to be helpful?

Mr. FAGA. I'm sure it will. I am not very familiar with how they're doing it in government at this moment. I did discuss with your staff the fact, for example, at MITRE, we moved a few years ago to 29 different job categories, to recognize the idea that, you know, some skills are hot at any given time and some skills are not. We have to differentiate them.

Mr. TOM DAVIS OF VIRGINIA. And you can do that in the private sector a lot easier than we seem to be able to.

Mr. FAGA. And I think that's what Ms. James is talking about, is better recognizing what are the skills.

Another point I might throw in while I have the mic that I think is related to this is there can be a tendency to overspecify positions and their requirements to fulfill them. There are a large number of people who have IT skills who would not qualify for jobs in the government and many cases in a place like MITRE. And I'm trying to break that mold at MITRE.

For example, we just hired a young man who went into the Army after high school, got excellent technical training and became familiar with some programs that we work on for the Army, and we have hired him as a technician. He has some college that he gained while in the Army. He will complete his degree while at MITRE and become a member of the professional staff 2 or 3 years downstream. So we and the Army are getting good service from him now at the technician level. We'll see him as a computer engineer downstream. We have to go on our own. We just have to make more of them.

Mr. TOM DAVIS OF VIRGINIA. Thank you. We have a vote on and I don't want to hold you longer. So I want to take a moment to thank everybody for attending this very important oversight hearing today. I want to thank all the witnesses, Congressman Turner, Representative Horn and other Members who participated and thank my staff for organizing it. I think it's been a very productive hearing.

I'm going to enter into the record the briefing memo that was distributed to the subcommittee members.

We will hold the record open for 2 weeks from this date if you want to forward an additional submission or an additional thought that occurs to you. We very much appreciate your time and your testimony today.

Thank you. These proceedings are closed.

[Whereupon, at 12 p.m., the subcommittee was adjourned.]

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