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President's Information Technology Advisory Committee
Subcommittee on Transforming the Government

Final Report

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May 18, 2000

Presentation Outline

- **Members, Charter, Objectives, Process**
- **Status**
- **Three Findings**
- **Three Recommendations**
- **Two Notes**

Panel Members

- **Co-Chairs**
  - **David Cooper**
  - **Bo Ewald**
- **PITAC Members**
  - **Vint Cerf**
  - **Ken Kennedy**
  - **Les Vadasz**
- **Other Members**
  - **Herb Schorr, USC/ISI**
- **Consultants**
  - **Government CIO Council**

Panel Charter

Study and recommend information technology R&D activities that can transform Federal Government functions for the benefit of the citizens.

Objectives

- **Recommend IT R&D priorities to:**
  - **Improve public access to government information, functions, and processes**
  - **Create more efficient and friendly ways for the public to interact with the government**
  - **Improve the efficiency of government functions by applying Internet and information technologies**
  - **Improve government processes and services**

- **Recommend three showcase projects using Internet, IT, and rapid prototyping**
  - **Government and industry participation**

Process

- Met with some CIOs
- Reviewed plans and previous reports
- Attended symposia
- Drafted report of Findings and Recommendations

Status

- Request for Participation SC 99
- Teleconferences December 99
- Meetings January 13, 2000
  - CIO Treasury, FISAC chair, IT for Crises Management WG chair, Digital Government PM
- Meeting February 24, 2000
  - CIO Treasury/ CIO Council Chair, CIO IRS, CIO SSA, ITCM chair and research representative, Digital Government status report, DARPA "Netcentricity" report
- Drafted Report March-May, 2000
- Attending NSF Digital Government Workshop May 16-18, 2000
- Meeting May 17, 2000
  - Reviewed Web.Gov
- Final Report Vote June 2000

Findings

- **Major technological barriers prevent citizens from easily accessing government information resources that are vital to their well being. This information is often unavailable, inadequate, and often needlessly complicated.**
  - **Focused on access and transactions**
  - **Start now using available technology**
  - **New technologies required to reach end goals**
- **IT can be used to increase organizational efficiency and effectiveness and save costs.**
  - **IT is both forcing function and implementation tool**
- **The Federal CIO Council understands IT's utility for improving government services and processes, and its strategy establishes appropriate and ambitious goals. However, budget processes discourage effective multiagency coordination and execution, and research efforts are required for many of them.**

Recommendation 1

Aggressively establish and coordinate IT research that addresses the Federal Government's most critical requirements for long term technology development.

- **Security and privacy**
  - — **Basic technology and scaling issues**
- **Data integration**
  - — **Coherent view of disparate systems**
  - — **Easy-to-use by non-technicians**
  - — **Efficient, evolvable**
- **Software development and quality**
  - — **Reinforced objectives, difficulty, and PITAC '99 list of technologies**
- (more)

Recommendation 1, continued

- Application of scalable information infrastructure
  - High volume, high reliability
  - Pursue digital libraries (ref. PITAC Subcommittee)
- Development and availability of high-end systems
  - Cited examples: law enforcement, weather modeling and prediction, large-scale planning, emergency information fusion, geographic IS, ecological sciences, integrated product and process development
  - Supporting civilian science and engineering research serves fundamental government purposes.
  - Pursue R&D of high-end systems, software, hardware components, including high-performance, large storage.
- Socioeconomic implications of government uses of IT
  - Measure and understand technology effects on relationships between government and citizens (including businesses)
  - E.g., On-line voting; security and privacy as both a political and technological issue

Recommendation 2 - The CIO who can say “yes”

The Administration and Congress should visibly support and expand upon the Federal CIO Council. The Administration should establish and empower a Federal Chief Information Officer, and Congress should provide this CIO funds for interagency projects.

- **Recognize and support the efforts of the CIO Council in implementing relevant Federal policies. The CIO Council’s efforts so far are laudable, but the mechanism is not yet sufficient for the task.**
- **CIO should report to the President or the President’s designee**
- **Mandate**
  - **to recommend and implement government policies to use IT and the Internet to rapidly improve the government's business operations, citizens’ access to government data, and their interactions with the government.**
- (more)

Recommendation 2, continued

[Federal CIO…]

- **Empowered**
  - **With $100M investment fund**
  - **to enable interagency IT research and development**
  - **to incentivize strong cooperation**
  - **to organize and add funds to interagency project and research budgets**
  - **to enable multiyear, intra- and multi-agency projects (viz. Y2K effort)**
    - **e.g. Web.Gov**
- **Responsible for ensuring that results of long-term R&D efforts are appropriately taken advantage of in advanced agency projects**
- **Should establish an effort to measure improvements and disseminate best practices and lessons learned.**

Recommendation 3

Establish pilot projects and Emerging Technology Centers (ETCs).

- **Crisis Management**
- **IT for IT Training**
- **Privacy, confidentiality, security, and authenticity for Internet-based Government Interactions with the Public**
- **Access for Disabled Citizens**
- **Integrating Statistical Information**
- **Web.Gov**

- **Benefits**
  - **Enable focused teams of application experts and computer scientists**
  - **Bridge near-, mid-, long-term efforts**
  - **Provide non-R&D agencies access to best IT researchers and facilities**
  - **Reinforce researchers' real-world understanding**
  - **Assist recruitment**
  - **Bootstrap improvement process and prove feasibility**
- (more)

Recommendation 3, continued

- **Pilots based on strategy of pursuing near-, mid-, long-term issues**
  - **Continual release of demonstration prototypes**
  - **Effective infusion of emerging technologies**
  - **Continuous pursuit of solutions to long-term research issues**
- **Requires government, industry, academic partnerships**
  - **Perhaps formally cross-matrix application pilots with technology centers (via contracts)**
- **Select best on-going multi-agency projects and build on them**
  - **Noted dependence on NGI and need for full funding and applications in more agencies**

Note on Federal Workforce Issues

Federal agencies should create and execute leading-edge projects such as those recommended here, publicize them, and use them as recruiting incentives.

- **[Not a formal recommendation because we focused on R&D.]**
- **Noted need for project managers and CIO Council response.**
- **Recommend that PITAC Learning Panel consider recommending a pilot project that builds on the current CIO Council projects to address this issue**

Note on National Security and DoD Issues

- **National security and DoD issues deserve one or more separate PITAC subcommittees.**
- **National security applications**
  - **E.g., Potential weakening of high-end computing as a national security technology**
- **Common issues but at larger scale with added security problems**
  - **E.g., Supply chain and logistics management**

Subcommittee on Transforming Government recommends that the PITAC form a subcommittee, perhaps two, to address these issues.