



Draft, March 1, 2009

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

This document outlines recommendations for managing the new National Center's start-up operation for its new board to review so that the Center can begin work quickly and effectively upon receiving its initial appropriation.

[What is the National Center?](#)

[How should the Center be managed?](#)

[How will the Center be funded?](#)

[What is the Center's mission?](#)

[What activities will the Center support?](#)

[Who should be eligible for funding by the Center?](#)

[Will the Center accept abstracts or proposals from foreign organizations?](#)

[What mechanisms for solicitations should be used?](#)

[How should the Center solicit proposals?](#)

[What types of contracts should the Center use?](#)

[How should Intellectual Property be handled?](#)

[What should the initial funding priorities be?](#)

[How should funding priorities be established?](#)

[How should awards be reviewed and selected?](#)

[What should be the length of the funding period for awards?](#)

[What should be the criteria for Board approval of grants and contracts?](#)

[How should the quality of the merit review process and its effectiveness in achieving strategic goals be evaluated?](#)

[How should the Center be organized and staffed?](#)

[How should the 2010 funding request \(\\$50 million\) be used?](#)

[What should be the timeline for establishing the Center and funding initial projects?](#)

[How should the Center assess its performance?](#)

[How should the Center coordinate its activities with federal agencies that fund R&D in related areas?](#)

[What are the guidelines for research involving human subject research?](#)

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

What is the National Center?

Concerned that our schools, community colleges, universities, libraries, museums and other learning centers, as well as many of our students and members of the nation's workforce are ill prepared to enter the global competition of the digital age, Congress voted overwhelmingly to establish the first new national research institution in many years. Modeled on the widely admired National Science Foundation, the new **National Center for Research in Advanced Information and Digital Technology** will support the development of advanced information and digital technologies for learning through grants and contracts and public and private partnerships. Driving the National Center's efforts to transform learning, workforce training and education is advanced digital information technology, perhaps the greatest force for innovation in history.

As President Barack Obama said about the need for educational reform and intensified workforce training, "We cannot ensure we're ready for the economic challenges of the 21st century if our schools and learning systems are firmly planted in the 20th century."

In the words of the Congressional Act establishing the new National Center, "The purpose of the Center will be to support a comprehensive research and development program to harness the increasing capability of advanced information and digital technologies to **improve all levels of learning and education**, formal and informal, in order to provide Americans with the knowledge and skills needed to compete in the global economy."

The Center was included in the College Opportunity and Affordability Act, H.R. 4137, the bill that reauthorizes the Higher Education Act. It was signed into law by President George W. Bush on Aug. 14, 2008 (P.L. 110-315). The Center will be organized as a Congressionally originated 501(c) (3) nonprofit corporation reporting to Congress through the Department of Education. It will bring the same focused, sustained research funding to technology and learning that the federal government has funded for years in technology for health care at the National Institutes of Health, for defense at the Defense Advanced Research Projects Agency, for energy at the Department of Energy, and for science at the National Science Foundation. Grants and contracts will be awarded on merit.

How should the Center be managed?

The Center will not be an agency of the federal government but an independent, nonprofit organization with its own nine member Board of Directors. The initial Board members will be appointed by the Secretary of Education from

Management Study for The National Center for Research in Advanced Information and Digital Technology

recommendations received from the Majority and Minority Leaders of the House of Representatives and the Senate. The Board will subsequently elect its own members after soliciting recommendations from the public. The initial Board will guide and oversee the Corporation's startup activities and set its strategic direction and policies. An Executive Director, who will be recruited by, and report to the Board, will manage the Center. The Corporation will have an office in Washington, DC and will employ a small professional staff and a small group of business, technology, and education consultants.

How will the Center be funded?

The Higher Education Act assumes funding for the Center will come from the Department of Education. The Center's funding levels will be determined by the Congressional appropriations committees. \$50 million is being requested for Fiscal Year 2010. The National Center also will be able to receive funds from other agencies – including the Departments of Defense and Homeland Security that have an enormous interest in education and training; as well as from U.S. companies, foundations, and other U.S. private donors interested in supporting research in education and training that can benefit the nation as a whole.

What is the Center's mission?

The Center's mission is to harness the power of information technology in the cause of learning by sponsoring research for pre-competitive, high-risk, long-term projects that will spur educational and skills training innovation. The Center will:

- Provide financing for research, development, and demonstration of advanced information technologies that can transform education, skills training, and lifelong learning.
- Build multi-disciplinary teams that mobilize the skills in America's schools, colleges, universities, museums, libraries, public broadcasting entities and other similar organizations, as well as the corporate sector, to achieve these goals.
- Support the testing and evaluation of these systems, and encourage the widespread adoption and use of effective approaches to learning.

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

What activities will the Center support?

The Center will support research to improve education, teaching, and learning that is in the public interest, but that is determined unlikely to be undertaken entirely with private funds. It will invest in:

- pre-competitive research, development, and demonstrations
- assessments of prototypes of innovative digital learning and information technologies
- pilot testing and evaluation of prototype systems
- activities to encourage the widespread adoption and use of effective, innovative digital approaches to improve education, teaching, and learning

The Center will encourage partnerships between nonprofit and for profit enterprises to carry out these activities. Private firms will take the concepts developed through Center investments and convert them into instructional products and powerful tools that educators can use to build new learning systems that reflect individual needs.

Who should be eligible for funding by the Center?

The Center may award contracts or grants to four-year institutions of higher education, museums, libraries, non-profit organizations, public institutions with or without for-profit partners, for-profit organizations, and consortia of any such entities, as well as individuals with promising ideas. Awards will be based on a competitive review of proposals that are submitted in response to solicitations calling for research ideas and proposals in priority areas.

Will the Center accept abstracts or proposals from foreign organizations?

By statute the Center cannot provide funding to any non-US entity.

What mechanisms for solicitations should be used?

The Center will use grant programs, requests for proposals (RFPs) and research announcements (RAs) to solicit proposals.

- Grant Programs – Grant Guidelines will be issued in categories recommended by the Center's Program Officers and approved by the

Management Study for The National Center for Research in Advanced Information and Digital Technology

Board. The grant guidelines will include eligibility requirements, proposal preparation instructions, application materials, methods for evaluating the applications, deadlines for submission and timelines for the review process as well as the financial and legal reporting requirements for successful awards.

- RFPs - An RFP will provide a specific statement of work, contract deliverables, and evaluation criteria for selection. It will list the requirements, solicitation provisions, proposal preparation instructions, and the evaluation method for the review of proposals. An RFP will serve as the basis for award selection.
- RAs – A Research Announcement will solicit proposals for technologies and methodologies that are either new, innovative, advance the state-of-the-art, or increase the knowledge or understanding of a technology or methodology. RAs will be used to support applied research, advanced technology development and demonstration and validation. RAs will be similar to Broad Agency Announcements (BAAs) used by the Defense Advanced Research Projects Agency (DARPA) and other federal agencies. BAAs are used "when meaningful proposals with varying technical/scientific approaches can reasonably be anticipated."

How should the Center solicit proposals?

The Center's website should provide a list of current programs and research priority areas. All solicitations will be prominently displayed on the website and the following information should be included:

A contact for the research priority areas and for each solicitation;

- Criteria for selecting proposals, their relative importance, and the method of the evaluation;
- Specific time available for submission of proposals; and
- Specific instructions for the preparation and submission of proposals.

In addition to Grant Programs, RFPs and RAs, the Center should hold a Learning Science and Technology symposium (similar to DARPATech) during its setup year and approximately every 18 to 24 months thereafter to discuss the Center's research interests and needs and discuss areas of mutual interest. Dates of the upcoming symposium should be advertised on the website. Also like DARPA, the Center should encourage concept paper submissions and discussions with its program managers to ensure that the Center is receptive to innovative proposals.

Management Study for The National Center for Research in Advanced Information and Digital Technology

The Center should establish an online grants submission, reporting and management capability. Proposals should be submitted electronically through the Center's website. In addition, research topics should be UNCLASSIFIED and only UNCLASSIFIED proposals should be accepted.

What types of contracts should the Center use?

Proposals identified for funding may result in a contract, grant, cooperative agreement, or other transaction depending upon the nature of the work proposed, the required degree of interaction between or among parties, and other factors.

How should Intellectual Property be handled?

All material resulting from the research should quickly be made freely and nonexclusively available to the public. According to the law, this provision may be waived if the Center's Executive Director and a unanimous vote of the Board determine that some restrictions on free and nonexclusive availability would result in significant public benefits.

What should be the initial funding priorities?

The Center's Board should establish well-defined priorities to allocate funds. The priority setting process should draw upon a broad cross section of stakeholders. The funding priorities will be outlined in the Center's annual budget plan. The strategic research areas, described below, were derived from workshops and conferences conducted over six years to develop a series of roadmaps for learning science and technology research and development to guide funding investments. These six strategic recommendations should be refined and revised by the Board. The initial strategic research recommendations are the following:

- **Instructional Strategies** to link what we know about how people learn with new models of instructional delivery that take advantage of digital technologies.
- **Advanced Learning Content** that accurately represent our current understanding of the sciences, mathematics, the arts, and humanities; this will include innovative approaches to use and make widely available content stored in the archives, vaults and collections of universities,

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

museums, libraries, and cultural institutions, as well as developing content and software to integrate this content into curricula.

- **Virtual Worlds Collaboration** to support the creation and maintenance of virtual worlds for education and training; this should include software tools and processes for recruiting contributors, connecting subject matter experts and content providers, and managing content development workflow, including peer review and rights management.
- **Question Generation and Answering** technologies and strategies to stimulate learners to ask questions and facilitate inquiry.
- **Improved Assessment Methods** that take advantage of the capabilities of digital technologies to make individual learning more productive, more compelling, and more personal.
- **Software Integration Tools, Interoperability Standards**, and exploration of **Copyright Issues** to reduce the design and development costs of digital learning systems and facilitate sharing and re-use of learning content and digital resources, thereby making them available to the widest possible population.

A variety of modes of research should be supported: single investigator, multi-investigator grants, as well as small and large centers. Research efforts should involve multiple disciplines and draw on expertise from academia, industry, and government laboratories. Efforts that cost several million dollars per year should not be unusual. Projects should focus on non-incremental, high-potential projects, even if high-risk, spanning theory, experiment, and application. Participation by education and training institutions that are willing to redesign their instructional practices and formal learning environments to take advantage of technology-enabled exploration, interactivity, and collaboration made possible by educational games and simulations, should be encouraged.

How should funding priorities be established?

The Board, Executive Director, and Program Managers should solicit ideas from many different sources, including technical communities; the Center's Advisory Groups, industry and academia, often in response to published Research Announcements or open industry meetings such as the Center's periodic technology symposium, and surveys of international technology. Small studies and projects should be commissioned to flesh out ideas.

The Executive Director, with input from the Program Managers, should prepare annually a three year plan for the Center, to be approved by the Board. The plan

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

should recommend research priorities, planned funding mechanisms, and a solicitation schedule for each of the three years and a budget of anticipated annual expenses.

The Board should publish the plan for the next calendar year, including funding programs and priorities and the probable costs of all programs, projects, and contracts, for outside review and comment. Following this review and comment, the Board should submit the proposed budget to the Secretary of Education and to the Congress, as the legislation requires.

Following the Congressional appropriations, the Board should approve the appropriate three-year plan and establish the budget for the coming year. Once the plan and budget are approved, the Executive Director should be responsible for executing the plan. Contract and grant awards greater than \$250,000 should require review and approval of the Board.

How should awards be reviewed and selected?

Selection of applications for award should be based upon merit review, the importance and relevance of the proposed effort, and funding availability. Cost reasonableness and operational realism should also be considered.

The legislation specifies that the proposals submitted to the Center will be evaluated by “panels of experts who represent diverse interests and perspectives.” Merit review processes vary across federal agencies in terms of the program managers’ involvement in selecting and awarding proposals, but all include some assessment of technical quality or scientific excellence and typically its relevance. Within the National Institutes of Health (NIH) the scientific merit of a proposal, as determined by peer review, is largely determinative. Within the National Science Foundation (NSF), peer review plays a role in the decision-making process, but NSF program officers also consider a wide range of other criteria. The military science agencies, such as the DARPA, the Air Force Office of Scientific Research (AFOSR), and the Office of Naval Research (ONR), tend to invest complete authority over research funding decisions in particular program officers. Peer review sometimes plays a role in funding decisions, but is not required.

Studies by the NIH and the National Academy of Science have concluded that conventional peer review processes tend to favor incremental research, where results can be largely guaranteed, over creative, high risk proposals. Recommendations on ways to address this tendency toward conservatism in peer review include setting aside a fixed amount of funding for high risk proposals or proposals submitted by young, less experienced researchers.

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

Given the Center's critical role in enabling innovation and exploiting new ideas and new approaches to improve how we teach and learn, its funding mechanisms should reflect the value of risk-taking and innovation. Rather than resort to set asides, the Center should focus on making the goals of the Center clear to reviewers, identifying individuals likely to be open to new ideas and comfortable working with interdisciplinary teams, and encouraging the Center's Program Officers to have substantive involvement in the discussion and flexibility in using advice from the review groups. Reviewers should be drawn from corporate, academic, and government sources and should represent both practitioners and researchers, with the mix depending on the topics being reviewed. It will be impossible to attract high-quality program managers if they are not given the power to shape the research portfolios they are assigned to oversee. To protect against potential abuses in the system, the Center's Program Managers should be required to maintain documentation of peer review panels in order to support audits of the process. Like NSF, the Center should institute a final check in the process by engaging a Committee of Visitors to assess periodically and comprehensively the fairness and legitimacy of its review processes and make the results of the assessment publicly available.

What should be the length of the funding period for awards?

As a general guide, most proposals should be for a period of 1-3 years. Requests for Proposals should specify the funding period based on the Program Manager's determination of an appropriate time frame to complete the R&D and in accordance with the annual plan approved by the Board. Most Research Announcements, however, will not. Applicants should be asked to request a length of time for funding that is appropriate for the work that is being proposed. The period of funding should be subject to negotiation between the award recipient and the Center.

What should be the criteria for Board approval of grants and contracts?

The Board should review proposals, and approve awards, modifications and sub-awards that have an annual amount greater than \$250,000. Approval should require a majority vote by the members present. Below the \$250,000 threshold, awards should be approved by the Executive Director, in accordance with the annual plan approved by the Board.

How should the quality of the merit review process and its effectiveness in achieving strategic goals be evaluated?

Management Study for The National Center for Research in Advanced Information and Digital Technology

Similar to the process used by the National Science Foundation, the quality of the merit review process and its effectiveness in achieving strategic goals should be evaluated through two levels of review: Committees of Visitors and Advisory Committees. Each Committee of Visitors should consist of outside experts who will conduct detailed reviews of proposal actions to assess the integrity and efficiency of the system for proposal review and the accomplishments of the awardees. The Board should establish targets for the number of programs to be assessed by Committees of Visitors each year. In addition to the Committees of Visitors, each Program Manager should have an Advisory Committee composed of external experts. The Advisory Committee should provide advice on priorities and program effectiveness and review the Committees of Visitors' reports and the Program Manager's responses to the Committees of Visitors' recommendations. The Advisory Committee should meet at least once per year. The Center's Annual Report should include the Committees of Visitors' and Advisory Committees' reports and the Center's response to each report with plans for improvements.

How should the Center be organized and staffed?

The National Center will be unique not only in its mission but in the way it will be managed. It will not be a government agency but a not-for-profit organization with an independent Board that will include educators, scientists, people from business, and professionals familiar with managing research that has transformed the way businesses use information technology. The research management strategy employed should draw on the best features of Department of Defense, NSF, and NIH R&D programs, and should incorporate the following features:

- R&D managed in accordance with a clearly defined roadmap that identifies goals and priorities for achieving them and that is regularly updated after consulting with experts in education, training, business, and government.
- A strong team of program managers with a very small staff, each assigned a major component of the roadmap.
- Flexibility in research management allowing fast response to new opportunities and an ability to draw on expertise wherever it may be found.

Given its small initial budget, the Center should operate as a small, relatively flat organization. As DARPA has illustrated, this management structure allows ideas to flow very quickly and leads to a rapid generation of new ideas. Initially (when funded at the \$50 million level) recommended staffing might be as follows: Executive Director, Chief Financial Officer, Communications Director; Development Director, three Program Managers, two Contracts Administrators,

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

and 1 full-time and 1 part-time administrative support staff. As the Center's funding grows and the Center is managing more research efforts, staffing should be increased. However the goal should be to keep the National Center's staff small so that the bulk of the funds will go to researchers throughout the nation who are capable of focusing the best of emerging technologies on what surely is one of the nation's most pressing challenges.

The Executive Director will be appointed by the Board. A national, competitive search should be conducted, as specified in the law, to find an individual with the appropriate expertise, experience, and knowledge. Center employees' annual compensation cannot exceed the annual rate payable for level II of the Executive Schedule under section 5313 of title 5, United States Code.

How should the 2010 funding request (\$50 million) be used?

The \$50 million appropriation being sought for 2010 might be used as follows:

- \$1.6 million for direct staff costs to begin the operations of the National Center.
- \$.8 million for IT support, rent.
- \$1 million for travel, supplies, board meetings, workshops, symposium, consultants, etc.
- \$ 46.6 million to be awarded as grants and contracts for research, development, and demonstration of advanced information technologies; building multi-disciplinary teams; and testing, evaluation, and advancement of these systems.

What should be the timeline for establishing the Center and funding initial projects?

It should be possible to issue solicitations during the Center's initial year. An interim staff should be hired as soon as funds are available. The interim staff will be responsible for working closely with the Board of Directors to organize and staff the first Board meetings, establish the 501(c)(3), file the articles of incorporation, draft by-laws for the corporation, put in place the needed IT and financial infrastructure for the Center, etc. At the first Board of Directors meeting, which should take place within 2 months of the Board appointments, the Board should begin recruitment of the Executive Director. Assuming the Executive is appointed within the first 6 months, this should allow time to complete staff

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

recruiting and develop a funding plan and issue solicitations within the first twelve months.

How should the Center assess its performance?

As part of the annual planning process the Board should establish long-term outcome measures as well as annual output and efficiency measures. Although not a federal agency, the Center should consider using a format similar to the Citizens' Report used by federal agencies to report key financial and performance issues, key goals and how funds are spent to meet those goals, as part of its annual report. The Center should engage a Committee of Visitors to periodically and comprehensively assess the Center's progress toward its long-term measures, as well as its performance on the annual output and efficiency measures.

The roadmaps for the Center's strategic research areas define a chronology of R&D, with milestones and recommended measures for evaluating progress. Progress toward these milestones should be assessed annually to understand which strategies are working and which aren't and to inform plans for improving results or, if necessary, eliminating failing projects and approaches. On a broader scale, objective goals for the Center should include faster learning speed and greater retention, without unacceptable increases in costs, and lowering the standard deviation of outcomes. Long-term measurements should assess progress toward these goals and include metrics for the following:

- increased learning speed
- heightened transferability of training to practical experience
- improved retention of knowledge and skills
- increased use of technology-enabled tools among teachers and specialists
- greater ease for teachers and specialists to build new instructional systems in a variety of subjects that support a range of learners
- increased cost-effectiveness

How should the Center coordinate its activities with federal agencies that fund R&D in related areas?

The Executive Director and the Center's Program Managers should meet at least once annually with program managers at the Department of Education, the National Science Foundation, and the Office of the Director of Defense Research

**Management Study for
The National Center for Research in
Advanced Information and Digital Technology**

and Engineering in the Department of Defense to learn of these agencies' funding plans and discuss results of prior year funding and to discuss the Center's research funding plan. The Center should send its three-year plan annually to each of the agencies' designated points of contact and seek comment. The agencies' points of contact should be invited to provide comments at the annual Board meeting at which the Center's plan is reviewed. The Center should document its coordination activities in its annual report to the Secretary of Education and the Congress.

What are the guidelines for research involving human subject research?

All research involving human subjects, to include use of human biological specimens and human data, selected for funding must comply with Title 45 Code of Federal Regulations, Part 46 (45 CFR 46), the primary set of Federal regulations regarding the protection of human subjects in research. Additional guidance may be established by the Board.



A Program to Transform Education,
Workforce Training, and Lifelong Learning

**National Center for Research in Advanced Information and Digital Technologies
STEPS TO START UP THE CENTER - ACTIVITIES AND TIMELINE**

This document describes the activities required to start up the Center and an estimated schedule for these activities.

Activity	Month
<p>1) Hire Interim Staff. The Center will need interim staff to undertake the steps necessary to establish the Center (the steps described here) and manage operations of the Center until the Board selects the Executive Director and other Center staff members are hired.</p> <p><i>At least three interim staff positions are recommended: Director, Chief Operating Officer, and Communications Director.</i></p> <ul style="list-style-type: none"> • <i>The interim Director should have general responsibility for the Center’s start-up tasks described here and to work with the Board to develop draft bylaws, a staffing plan, and an initial budget for the Center. The interim Director should be knowledgeable of learning science and technology R&D and if possible have experience in starting up research organizations.</i> • <i>The interim Chief Operating Officer should be responsible for putting in place initial record-keeping and accounting systems. He or she should have extensive experience in non-profit operations.</i> • <i>The interim Communications Director should be responsible for organizing meetings with stakeholders to share information and seek input; preparing information to respond to requests for information about the center, and establishing the initial website and content. He or she should have expertise in non-profit and/or government sector communications.</i> 	<p>1</p>

National Center for Research in Advanced Information and Digital Technologies
 STEPS TO START UP THE CENTER - ACTIVITIES AND TIMELINE

<p><i>Given the temporary nature of this work, it would probably be best to fill these positions via contracted services. The Secretary of Education could put in place a short term contract for these services.</i></p>	
<p>2) Establish temporary office space for interim staff. The interim staff will need office space, furniture, office equipment, phone, internet, email services, etc. Temporary accommodations will be needed until an Executive Director is hired and can find more permanent office space. Office space, furnishings and office services could be included in the contract for the interim staff.</p>	
<p>3) Form a Board of Directors. The Board of Directors, with the aid of the Center's interim staff, will develop bylaws for the Center and establish an initial budget and operational plan for the Center.</p>	1-3
<p>4) Draft bylaws. At the Board's direction and with its advice and guidance the interim staff will develop draft bylaws. The bylaws will be drafted with the help of an attorney and approved by the Board early in the Center's development.</p>	4
<p>5) Develop a budget. At the Board's direction and with its advice and guidance the interim staff will develop a budget based on potential income for the year.</p>	3-5
<p>6) Develop a record-keeping system. The interim staff will establish a process and system for saving corporate documents, including board meeting minutes, bylaws, Articles of Incorporation, financial reports, and other official records.</p>	1-3
<p>7) Develop an accounting system. The interim staff will establish financial controls and accounting practices to ensure responsible financial management and auditable records.</p>	1-6
<p>8) Hold an organizational Board meeting. The Board should hold an initial organizational meeting to:</p> <ul style="list-style-type: none"> ● Appoint corporate officers ● Adopt the bylaws ● Approve the Articles of Incorporation and designate the incorporators of the Center ● Establish a process for recruiting and selecting the Executive Director ● Set an initial budget for the Center ● Designate an insurance agent to advise on liability insurance, 	2-6

National Center for Research in Advanced Information and Digital Technologies
 STEPS TO START UP THE CENTER - ACTIVITIES AND TIMELINE

<p>property insurance issues and staff issues such as worker's compensation, health and life insurance benefits, etc.</p> <ul style="list-style-type: none"> • Designate a lawyer to assist with filing the articles of incorporation; applying to the IRS for tax-exempt status; and reviewing personnel policies • Designate a bank 	
<p>9) File Articles of Incorporation. Articles of Incorporation are official statements of creation of an organization filed with the appropriate state agency. They are important to protect both board and staff from legal liabilities incurred by the organization, making the corporation the holder of debts and liabilities, not the individuals and officers who work for the organization. The specific requirements governing how to incorporate are determined by each state.</p>	1-3
<p>10) File for 501(c)(3) status. To apply for recognition of tax-exempt, public charity status, obtain Form 1023 (application) and Publication 557 (detailed instructions) from the local IRS office. The application is an important legal document, so it is advisable to seek the assistance of an experienced attorney when preparing it.</p>	1-3
<p>11) Apply for a federal employer identification number.</p>	1-3
<p>12) File for tax exemption.</p>	1-3
<p>13) Fulfill charitable solicitation law requirements. Document reporting requirements; ensure record-keeping and accounting systems are designed to track and report activities, ensure staff are properly trained on requirements and procedures, and obtain any required permits or licenses.</p>	1-3
<p>14) Apply for a nonprofit mailing permit. The federal government provides further subsidies for nonprofits with reduced postage rates on bulk mailings.</p>	1-3
<p>15) Setup Center's website.</p>	1-3
<p>16) Appoint permanent Director.</p>	3-6
<p>17) Recruit Center staff and acquire permanent office space. With Board's approval Executive Director should begin recruitment for other positions and begin search for office space.</p>	4-6

**National Center for Research in Advanced Information and Digital Technologies
STEPS TO START UP THE CENTER - ACTIVITIES AND TIMELINE**

<p>18) Appoint staff members. Establish office. Select office space, acquire furnishings and services.</p>	<p style="text-align: center;">7-8</p>
<p>19) Board Meeting. Introduction of new staff members, discussion of methods for seeking input that will be used to develop the research funding plan, approval of process for developing the research funding plan. Issue call for nominations for Council of Advisors.</p>	<p style="text-align: center;">8</p>
<p>20) Develop research funding plan. Establish Advisory Committees. The Executive Director and Program Managers should develop the initial research plan. Program managers should establish their advisory committees.</p>	<p style="text-align: center;">9</p>
<p>21) IT systems in place including grants management and proposal review tools.</p>	<p style="text-align: center;">4-9</p>
<p>22) Request for Information meeting with learning science and technology research community to discuss the research plan and planned solicitations.</p>	<p style="text-align: center;">9</p>
<p>23) Board Meeting. Review and approve the research plan (types of solicitations, review and award processes, funding levels, etc.)</p>	<p style="text-align: center;">10</p>
<p>24) Issue call for proposals.</p>	<p style="text-align: center;">11</p>
<p>25) Board Meeting. Establish Committee of Visitors and establish a schedule for reviewing the Center's initial year of operation. Establish the Council of Advisors and meetings schedule.</p>	<p style="text-align: center;">14</p>
<p>26) First awards made by Center.</p>	<p style="text-align: center;">14</p>

START-UP AND OPERATIONAL BUDGET ESTIMATE

This document is an estimate of costs to start-up the new National Center. These are estimates and may not include all costs. Actual expenses may vary.

<u>Category</u>	<u>Expense Calculations</u>			<u>Initial Year Expense</u>	<u>Year 2 Expense</u>
Board Meetings	<u>Cost Estimate</u>	<u>Qty per Meeting</u>	<u>Cost/Meeting</u>		
meeting room rental	\$1,000	1	\$1,000		
food/refreshments per person	\$100	100	\$10,000		
rt airfare per person (assume 9 board members + 6 invited guests)	\$1,200	15	\$18,000		
lodging assume 2 nights in DC	\$700	15	\$10,500		
local transport	\$50	15	\$750		
record & transcription fees	\$500	1	\$500		
someone to write the minutes	\$1,000	1	\$1,000		
someone to manage the meetings	\$1,500	1	\$1,500		
some web/admin support	\$1,000	1	\$1,000		
estimated cost per meeting			\$44,250		
<i>Total Board Expenses (assume 4 meetings per year; calculation is 4 * \$44,250)</i>				\$177,000	\$177,000
	<u>Base</u>	<u>Fringe multiplier</u>	<u>Base + Fringe</u>		
Staff					
Exec Dir	\$165,000	1.35	\$222,750		
CFO	\$150,000	1.35	\$202,500		
Sr Admin (financial)	\$80,000	1.35	\$108,000		
Admin for rest of staff	\$50,000	1.35	\$67,500		
Prg Area Mgr 1	\$120,000	1.35	\$162,000		
Prg Area Mgr 2	\$120,000	1.35	\$162,000		
Prg Area Mgr 3	\$120,000	1.35	\$162,000		
Communications Director	\$120,000	1.35	\$162,000		
Development Director	\$120,000	1.35	\$162,000		
Contracts Admin 1	\$80,000	1.35	\$108,000		
Contracts Admin 2	\$80,000	1.35	\$108,000		
* this staffing plan assumes that some services are acquired by contract					
<i>Total Staff Salary & Benefits Expense</i>				\$1,626,750	\$1,626,750

Category	Expense Calculations	Initial Year Expense	Year 2 Expense
Office Expenses			
lease office space: to simply estimate, assume 16 "offices" (this will allow for hallways, kitchen, workroom, etc); assume 200 sq feet per "office"; assume \$35/sq ft; calculation for annual expense is: \$35 * (16*200) = \$112,000	\$112,000		
office furnishings: for estimate assume 16 "offices" in order to allow for furnishings for workroom, kitchen, vistors, etc; assume \$1,500 spent per office. Calculation is: \$1,500 * 16	\$24,000		
office telephones and blackberries (25 pp/month * 12 persons)	\$3,600		
misc supplies, posting, shipping (\$500/pp/year)	\$6,000		
<i>Total Office Setup & Annual Expenses</i>		\$145,600	\$121,600
Travel for staff (for each trip)			
note: these are estimates and use an average cost per travel component			
2 nights lodging	\$300		
r/t air	\$800		
local transport (assume car rental)	\$150		
per diem (assume 3 days)	\$150		
estimated average cost per trip	\$1,400		
<i>Total Staff Travel Expenses - assume Exec Director and Program Managers each travel 12 times per year; calculation is 48 trips * \$1,400</i>		\$67,200	\$67,200
avg # participants			
Workshops/Advisory Meetings/Council of Advisors Meetings	<u>Cost Estimate</u>	<u>Qty per Meeting</u>	<u>Cost/Meeting</u>
3 nights lodging	\$450	15	\$6,750
r/t air	\$800	15	\$12,000
per diem	\$150	15	\$2,250
local transport	\$60	15	\$900
facilities	\$2,000	1	\$2,000
food/refreshments	\$100	15	\$1,500
estimated average cost per meeting			\$25,400
<i>Total Workshop Expenses - assume 5 in the initial year and 8 in Year 2</i>		\$127,000	\$203,200
Annual Symposium			
	<u>Cost Estimate</u>	<u>Qty per Meeting</u>	<u>Cost/Meeting</u>
facilities	\$3,000	1	\$3,000
food/refreshments	\$100	150	\$15,000
speaker fees	\$5,000	2	\$10,000
estimated total expense			\$28,000
<i>Total Annual Symposium</i>		\$28,000	\$28,000

Category	Expense Calculations			Initial Year Expense	Year 2 Expense
IT Infrastructure and Services					
data center per month (12 months)	\$1,000	12	\$12,000		
bandwidth services per month (12 months)	\$1,000	12	\$12,000		
network, software, web support (support contractors full time)	\$150,000	1.5	\$225,000		
grants mgmt license/hosting (replicated)	\$100,000	1	\$100,000		
software licenses for databases, document/content mgmt system, etc	\$80,000	1	\$80,000		
software development services	\$200,000	1	\$200,000		
desktops/laptops/printers/fax	\$2,000	12	\$24,000		
servers	\$12,000	3	\$36,000		
software licenses /pp	\$1,000	12	\$12,000		
remote backup services	\$500	12	\$6,000		
total estimated expenses			\$707,000		
<i>Total IT Purchases and Services</i>				\$707,000	\$707,000
Staff Support Provided by Contractors					
Legal (retainer)	\$50,000	1	\$50,000		
Audit Services	\$50,000	1	\$50,000		
Acctg services (payroll, grants payments, etc.)	\$50,000	1	\$50,000		
<i>Total Contracts, Legal, and Financial Services</i>				\$150,000	\$150,000
Misc consultant services					
assume 6 contractors avg of 25k each to provide specialized expertise	\$25,000	6	\$150,000		
<i>Total Outside Consulting Services</i>				\$150,000	\$150,000
TOTAL ESTIMATED EXPENSES				\$3,178,550	\$3,230,750
% of Total Budget (Assuming \$50 million budget)				6.36%	6.46%