

# **DIGITAL FUTURE INITIATIVE**

***CHALLENGES AND OPPORTUNITIES FOR  
PUBLIC SERVICE MEDIA IN THE DIGITAL AGE***

***A REPORT BY THE DFI PANEL  
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# REPORT OF THE DIGITAL FUTURE INITIATIVE

## EXECUTIVE SUMMARY

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America's public broadcasting service stands at a historic intersection of challenge and opportunity:

The challenge is to shape the transformational changes associated with today's new and rapidly evolving digital media technologies for the public good. The era of broadcasting as an exclusively scheduled and one-way service is ending. Already the "push" of scheduled and limited programming is steadily being replaced by the "pull" of more diverse content selected by consumers – media on "my time" that is also segmented and formatted for delivery not only on television and radio, but also on computers, cell phones, PDAs, iPods and other increasingly portable devices.

The opportunity for increased public service in this digital future is even more dramatic than the technological shift. The digital transformation creates not only vast new commercial markets for media, but also enormous new opportunities for *public media* to meet the nation's diverse needs for lifelong education, increased engagement in local civic affairs, public health and emergency preparedness information, and other noncommercial content. It will be an

era in which public broadcasting's strengths grow even more obvious and unique. No other media enterprise is better structured with its national/local model of service, or more experienced in the use of technology, or better positioned with its high level of trust, to capture additional value in the Digital Age. At the same time, no other media enterprise is more poorly financed to pursue the opportunity. The mandate of the Digital Future Initiative (DFI) is to put forth new possibilities for service and for securing the resources to provide them.

From the beginning, public broadcasting has been underfinanced for the mission so clearly laid out in the 1967 Carnegie Commission Report, a report that President Lyndon B. Johnson echoed as he signed the Public Broadcasting Act, challenging public broadcasting to manage the miracles of mass communication (then limited to television and radio) to create miracles of learning and to be a marketplace of ideas. Within a few short years this mission – to use media to educate, to inform, to inspire, to reflect this country's history and culture –

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united local public television and radio stations into a national “network” reaching every community, connected by a new satellite interconnection system, and receiving small annual appropriations from Congress.

With a unique national/local delivery of programs and services and a public/private structure for funding, public broadcasting has been creating “miracles” ever since:



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producing the very best in educational children’s programs, comprehensive science and history content, and top quality drama and cultural performances, while also becoming the nation’s most trusted source of news, information and independent documentaries. Public broadcasters have also led the way when new technology applications emerged that could enhance public service. Public broadcasters

pioneered closed-captioning on programs, distance learning, delivery of curriculum content to classrooms and, significantly for this report, were the first broadcasters to transition to digital technology over both television and radio, an unfunded mandate that will cost at least \$2 billion to complete.

Now the question is how to harness the new, rich and flexible digital media technologies to create new miracles of learning and community engagement. This report attempts to address how best to do just that: to turn technology’s challenges into

opportunities, technology’s promise into actions. Specifically, the report focuses on four areas where digital technology can meet the growing educational needs of learners of all ages, and also strengthen community and country by informing and engaging citizens about the civic issues of our times – from health care, to the processes of democratic governance, to the exigencies of emergency alert and preparedness.

As one-way, analog broadcasting is supplemented by a wide variety of digital media formats and platforms, the public broadcasting community needs to reconstitute itself as *public service media*. Rather than serving as an arbiter of excellence in scarcity (deciding what airs on a limited time schedule), PBS, NPR and their member stations now have the opportunity to be the conveners and leaders of a much larger effort to create far more content and support its delivery in far more ways.

The audience-aggregating power of the Internet, combined with low distribution costs, makes viable “niche” programming that is not economically feasible for either commercial or public broadcasters today, but which the original Carnegie Commission challenged public broadcasting to provide from the beginning. Public broadcasting can employ digital media to enhance delivery of public service media to traditionally under-served groups while expanding offerings to all Americans by offering a national (indeed, international) outlet for local and specialty programming.

Public broadcasting is uniquely qualified to address these challenges: It is one of the

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most trusted public institutions in the nation; it is deeply rooted in American communities, with 348 public television stations and an even larger number of public radio stations operated by colleges and universities, community foundations, state commissions and school districts; and it has a proven record of producing high-quality programming with the public interest foremost in mind. Now it is time for public broadcasting to meet the challenges of a new era.

As it embraces emerging media technologies, public broadcasting can and must use these tools to address two urgent national challenges: lifelong education (from our youngest toddlers to our oldest citizens) and community engagement.

### A Digital Future for Lifelong Education

For all the progress that many of the nation's schools and school systems have made, student achievement is still stagnating in critical subject areas and in too many communities. Although a nation's human capital will increasingly determine the living standards of its citizens, America's young people lag behind their counterparts in many of the countries that are our economic competitors. In tomorrow's globalized, high-technology economy, workers will need more skills and knowledge than ever before to qualify for and keep new and better jobs. That is why public television should greatly expand and improve its efforts to promote lifelong education for Americans – from the developmentally crucial preschool years, to K-12 and home school education, to higher education,

continuing education, education for the learning disabled, workplace training and retraining. In the new economy, education is a lifelong process.

A recent study of the media habits of children aged 8 to 18 dubbed today's youth *Generation M* (for Media). While media is a big part of the problem, it is also essential to the solution. One way to leave no child behind is to follow them home. If "Gen M" is not likely to reduce their media consumption, then we need to reach them everywhere they are with compelling but also educational content.

Unfortunately, the nation's schools do not have the educational content to make the fullest use of these new technologies – indeed, most children and adolescents have more sophisticated media technology and software in their bedrooms than in their classrooms. Like commercial content, educational content must be customized for delivery on the devices that occupy more of their time than school itself – the Internet, video games, DVDs, iPods and, yes, sometimes even broadcast television – not only with dedicated channels for kids and education, but also with curated gateways to a vast and indexed archive of educational video on demand.

Public television has demonstrated excellence in promoting and improving early childhood learning. Now is a pivotal time to provide public television with substantial new resources to expand from that base. Government spends \$500 billion annually on public education – but less than \$50 million on R&D and content for educational



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technology, far less than what is spent by the video game industry alone. In its most important recommendations, this report explains why and how public television should promote lifelong education by launching two far-reaching national educational initiatives with a wide range of traditional and nontraditional partners:

### ***Ready to Learn: The Early Childhood 360 Initiative***

We need to build on the proven success of PBS's *Ready To Learn* program to prepare



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content and training materials for parents, teachers and caregivers so that our youngest children are far better prepared to read and learn. Research shows that if children have not mastered basic learning skills by the third grade, they never catch up. A few broadcast television

programs, regardless of their quality, are not enough. We need to fund an extensive, multimedia, on-the-ground outreach and training effort – through local stations in partnership with educators in communities nationwide – to teach and equip the adults who prepare our youngest children to be ready to learn at school.

### ***Lifelong Educational Content: The National E-Learning Initiative***

We call on PBS to convene and lead the creation of an extensive new online library of digital educational content and new e-learning tools (such as electronic games) with an initial focus on the third through the twelfth grades. This will include

producing content in key areas such as math and science for special communities of learners, particularly the home-schooled, students with learning disabilities, students from homes where English is the second language, and adults needing literacy and workforce training. This content will be available online and supported by sophisticated new search, segmentation and other tools.

### ***A Digital Future for Community Engagement***

We believe that public broadcasting can and must leverage its unique strengths – particularly its strong local roots and reputation for trustworthiness – to address three important needs currently impacting American communities: first, the need for a robust, thoughtful, factual and civil discussion and coverage of local, state and national civic affairs; second, the need for broad dissemination of public health information for our citizens; and third, the need for localized emergency preparedness education and emergency alert communications that anticipate potential disasters and disruptions.

### ***Civic Engagement***

The cornerstone of a healthy democracy is an informed and engaged citizenry. However, the commercial broadcast media leave gaping holes in the coverage of public issues and the workings of our democratic institutions on the local, state and national levels. The discussion that does take place about public issues has become increasingly partisan, sensationalized and devoid of objective facts. It is hardly a surprise that in this environment more than half of all

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Americans don't even vote in most elections.

At the local, state and national levels, public broadcasting already offers high-quality public affairs programs, including local news and discussions. Both NPR and Public Radio International (PRI) have expanded their excellent national and international coverage even as the commercial networks slash theirs. This report recommends that public broadcasting build on these efforts and create digital channels and online portals for Americans to access improved and expanded coverage of local news and governmental, civic and cultural affairs. Eventually, public broadcasting should create public squares – digital civic forums – in every state. Public television stations in Alaska, Minnesota and other states are already leveraging their digital multi-channel capacity for this purpose – and, with adequate resources, the new technologies can allow public service media to facilitate informed civic engagement in every state.

### **Public Health Information**

America's aging society faces an increasing number of personal and public health issues, yet our nation has few and intermittent means of communicating important health care information via the mass media. The mere existence of excellent information on a website is not sufficient to meet the need. Public broadcasters in states like Kentucky are already leading the way. This report recommends that public television and radio partner with expert health care organizations to offer on-air and online

content, along with community outreach, to provide a substantial increase in reliable public health information to the public in every locality.

### **Community Preparedness and Homeland Security**

The terrorist attacks of September 11, 2001 challenged the security of the United States and the safety of its citizens. They uncovered weak spots in the nation's emergency communications infrastructure, gaps made more glaringly apparent during Hurricane Katrina this year. One of the greatest weaknesses is that most of the nation's emergency response agencies and personnel – even those in the same communities – cannot effectively or efficiently share information among themselves or with the public.

Emergency preparedness and response is not a core mission of public broadcasting, but the system has national satellite and fiber capacity to contribute, and its member stations make up a network reaching 98 percent of the American public. The public broadcasting system cannot and should not become the national or local emergency network, but given their public interest mission and credibility, PBS, NPR and member stations can convene national and local partnerships to create interoperable and more effective public emergency alert and information systems,



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leveraging both current and new digital capacity. In addition, public broadcasters have the content creation and communications expertise to generate national and local preparedness programming for broadcast and Internet access in emergencies, for public education and for emergency responders (“just-in-time training”).

### **Making the Digital Transformation**

To make the transition from one-way broadcasting to public service media, and particularly to serve the educational and community purposes discussed above, PBS, NPR and their national and local partners should work jointly to create an innovative

and unprecedented content archive and delivery system.



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### **Unlocking Existing Content**

Public television and radio have produced a treasure trove of content over the years. But this content is not automatically or readily available for use in the digital world.

Two steps are necessary to make this content available for delivery on demand. First, intellectual property rights must be addressed. In general, most public broadcasting entities do not have 100 percent ownership of – that is, unrestricted rights to use – programming they have broadcast. Their rights are often limited to broadcast use and limited in time. A continuing, anytime, on-demand content service requires the intellectual property

rights to use the content for those new purposes in new and diverse formats. This involves an extraordinary process of agreements between public broadcasters and producers, unions for creative talent, holders of music rights and others. Second, the content needs to be digitized, reformatted and indexed by segment so that it is easily accessible and searchable by teachers, students, parents and others. Some users may want the entire program; some may want clips; some may want some of the backup material on a website. This combination of rights and reformatting presents a complex and expensive hurdle.

The stakes are high. Without digital rights, the great treasure of the national and local station archives will be lost for many of its best educational and other uses. Public broadcasting will not be able to use the content in these new ways. And educators, students, parents and every interested American will be the losers. That is why we recommend that additional funds be provided to public broadcasting to purchase the rights and make it possible to convert archived programming to digital forms for new educational, community service and other noncommercial purposes. This will not be cheap, but the cost of not doing it will be much higher, for our children’s education and our nation’s civic and cultural life. It is why we also recommend that PBS provide a national service of rights management through the public service media engine discussed below.

### **The New Distribution Services Paradigm**

PBS and NPR have long histories of serving their member stations by providing a

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national network interconnection. We need a 21st century version of that – a *Public Service Media Web Engine*. This set of services would make it possible for Americans to access public service media anywhere, anytime and on demand through current local and national portals like pbs.org, npr.org and station websites.

The mechanisms would be invisible to consumers, but the fully customizable, searchable, web-based set of content and services backing up the portals would provide virtually unlimited “shelf space” for new, current and archived content. It should become the world’s largest aggregation of noncommercial media content – and also include resources from other national and local public institutions as well. It would increase the use of all content in any place and at any time. And it would improve the calculus of content creation for the nation’s noncommercial media creators because it would expose those products to an international audience, not just a local one. Just as they manage the current satellite and fiber interconnection system on behalf of their members, so too could PBS and NPR take the lead in developing this on-demand model as a new media distribution system open to the content of all public service media creators.

### **Funding the Transition to Public Service Media**

Bringing public broadcasting into the digital age will require substantial new resources. But America’s public broadcasting system – particularly the nation’s 348 local TV stations and their national organization, PBS – is facing a

crisis of its own. While the system’s income is essentially flat and barely adequate to continue current analog operations in most local markets, the one-time cost to transition the system’s infrastructure and content from analog to fully digital will require an additional expenditure on the order of \$2 billion over five years. Where will these resources come from? There is no one silver bullet.

The current federal contribution to public broadcasting has never been sufficient. Alone among the public media services of the world’s leading nations, public broadcasting in America is overly dependent on the vagaries of year-to-year Congressional appropriations. For every federal dollar received, PBS, its producers and stations have leveraged \$5 to \$8 from the private sector to sustain both a national program schedule and robust local programming. However, with increasing production costs and growing needs to retain rights to optimize value across all new digital media platforms, more funds will be necessary merely to sustain what is currently being produced and distributed. Simply to purchase the infrastructure it requires if it is to keep broadcasting in digital only, the public broadcasting system requires an additional \$700 million over the next five years. To complete the digital content transformation and provide expanded content and services for education and other urgent needs, public broadcasters will face additional substantial costs.



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The system needs to raise new and more substantial, sustainable and independent streams of private *and* public funding. The current funding models for public



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broadcasting are woefully inadequate to make a robust transformation to the digital era, let alone to meet the challenge of providing the enhanced educational, civic and community information services recommended in this report. Business leaders, foundations and philanthropists need to invest significantly more than they do at present in the programs recommended here. At the same time, we believe that America's public service media system cannot thrive in the digital future if it remains dependent on inadequate, unpredictable and potentially politicized annual appropriations from Congress. While the panel believes it is premature to endorse any particular source, the report suggests possible options for new public revenues, including modest user fees on new digital televisions and video recorders, on non-educational video games, and increased annual user fees on commercial broadcast spectrum licenses.

We recommend that these new resources be managed through a private and independent *Digital Future Endowment*, which could be administered through distinguished independent boards affiliated with the existing PBS and NPR foundations. These foundations should leverage public funds, or earmarked user fees, with stepped-up private fundraising

efforts on a matching basis. Where appropriate and possible, their grants should be subjected to clear, research-based performance requirements.

We challenge federal and state governments, foundations, private sector institutions and public broadcasting's leaders to consider this new era in media, the Digital Age, as the time when public service media, more than at any other time in its proud history, should have both the expansive vision and the resources to meet its mission to serve the public.

## Next Steps

This report kicks off a national effort to bring public broadcasting into the digital era, as *public service media*, so that it can meet the nation's needs in education and community engagement while continuing its unique contribution to our cultural life. The national organizations and the stations they serve need to work together to assess the needs of the public and then to shape responses to these needs that both national content and local content and services can best fill. A strong PBS and a strong NPR are essential to meeting new demands and seizing the new opportunities outlined in this report. However, there is just as critical a role for the local stations, which will be much more than distributors of national content, as indeed they are now. They will be full partners in the development of new content and the evolution of current educational services to meet the needs of students and teachers, and essential in fulfilling public service media's role in every community to be the public square, the forum for diverse ideas, perspectives and in-depth civil discourse.

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Getting the balance right between national and local in terms of the content and distribution of new services will take thoughtful consultation with local PBS and NPR stations and their constituencies throughout the country. This consultative process has already begun at PBS, as the system's president and CEO is traveling to various communities, at the invitation of local stations, to hold public forums and meetings with constituency groups such as teachers, university and college partners, and business and cultural leaders. There need to be as many of these local consultations with

communities as possible to ascertain what the public needs and expects from digital media and how public service media should respond to these needs with new and valued services.

We hope that PBS and its colleagues will carry our recommendations forward. We strongly encourage the public television system to establish working groups of leaders from among its staff, its stations and producers, third-party experts and allies to develop detailed business plans and budgets for delivering the specific programs to meet the vision described here.



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