Mt. Hood Cable Regulatory Commission
Community Access Capital Grant Program Evaluation

I. Executive Summary

Now in its fifth year, the Community Access Capital Grant program of the Mount Hood Cable Regulatory Commission (MHCRC) promotes the use and availability of advanced cable system technologies at low cost to public agencies and nonprofit organizations. The MHCRC commissioned Hi-Beam Consulting to evaluate the effectiveness of its grant program and to provide information that will guide the Commission's future funding decisions. Evaluation methods included a comparative review of grant project documentation, interviews with grantees, and focus groups with current and potential grantees.

In keeping with the larger purposes of the public and nonprofit sectors, the Commission seeks to achieve maximum public benefit with the grant program. The Community Access Capital Grant Program funds local projects that 1) improve delivery or increase the effectiveness of services; 2) reduce disparities in underserved communities; 3) improve community involvement in issues of importance to the community; and 4) reduce costs of public services or foundations. A review of trends in technology grant making revealed several success factors for technology related projects including committed leadership, stakeholder involvement, an infrastructure that includes knowledge and skill attainment (not just technology), technology planning as part of overall organizational planning, and attention to program evaluation.

Twenty-five projects funded by the Commission from 1999-2003 were reviewed, representing an investment of more than $2 million in Community Access Capital Grant Program funding and over $4.8 million for technology-related projects when matching funds are included. Awards made in annual competitive grant rounds and two special funding rounds were reviewed. Grant funded projects employ a wide range of cable-related technologies to benefit a diverse public, including teachers, students, parents, ethnically diverse communities, citizens with special needs, and the general public. In addition, the awards increase the capacity of educational, nonprofit and local government agencies in Multnomah County to benefit the public through technology-related projects. Sixty percent (60%) of the grant awards reviewed improved technological capacity in educational institutions. Local government agencies represented twenty percent (2%) of the grantees. Nonprofit organizations made up twenty percent (20%) of the grantees.

The majority of projects in the regular competitive grant program (80%) benefited the public through improved delivery or increased effectiveness of services. A majority (68%) reduced disparities in underserved communities. Over half (52%) supported community involvement in issues of importance to the community and nearly half (48%) reduced or avoided costs of public services or functions. The nineteen completed grant projects analyzed demonstrated high levels of program success and many of these projects demonstrated commitment by exceeding the grant program's matching funding requirements. Although grant projects were successful overall, anticipated timelines and milestones were only partially met by twenty-six percent (26%) of the

completed projects in the annual competitive grant rounds. Although some delays were due to circumstances beyond the grantees' control, others resulted from factors that could have been addressed with more incremental and realistic planning for technology before the projects began.

Of the nineteen completed grant projects analyzed, most (89%) expect to continue beyond the funding period. Supporting factors contributing to grant project success included the cooperation of partners, grantees' ability to leverage additional resources, the vision and flexibility of the MHCRC staff and Commission, and political support. The main barriers for grantees were internal organizational issues, equipment issues, and problems with the cable provider and/or the cable system's technical capabilities. Approximately half of grantees reported that they leveraged their grant awards to generate new funding such as foundation grants, user fees, in-kind donations and government funding. The following major lessons learned were emphasized by grantees involved with completed projects: Be cautious with new (unproven) technology; take time to assess needs and involve stakeholders in project planning; build internal support; conduct research and provide for training and integration; and start small and build incrementally.

Grantees consistently reported that conversations with MHCRC staff were the most helpful aspect of the grant program's pre-application and application process. Although most grantees found the grant application to be clear, some found it daunting. Eighty-nine percent (89%) of the grantees met their proposed budgets. In many cases, the grantees reported more matching funds than proposed. Many grantees struggled with reporting and evaluation requirements. Some reported success with evaluation activities in team-building, meeting project milestones, and making program improvements. Evidence suggests that small organizations and many teachers are over-stretched and under-resourced, making it difficult for them to fulfil grant program requirements. Focus group participants with awareness of the issues facing some new immigrants highlighted the special challenges presented by the combination of cultural and language issues and little experience with communications technology.

Looking to the grant program's future, grantees emphasized several areas of need: *leading edge applications* that combine print, audio and moving image communications; *multilingual communications*, to serve diverse cultural and language groups; an interconnected, high capacity *regional communications infrastructure* in the tri-county area; *professional development for public servants*—for example through in-service training for teachers, government workers, healthcare and social service providers; and *technology upgrades and maintenance* to enable grantees to keep up with continual technological change.

Recommendations included the following: streamlining the grant program's reporting requirements and the reporting process; implementing a visibility plan for ethnically diverse and special needs populations; facilitating technical assistance for grantees, particularly with program evaluation; providing more customization of the grant program to address particular stakeholder needs; and fostering a learning community including expanded peer networking opportunities and an enriched website. The study also suggested that the MHCRC provide leadership in the tri-county area for strengthening regional infrastructure interconnectivity, and create a consortium of regional philanthropic organizations interested in technology funding. Such a consortium could supplement the capital funding available through the MHCRC grant program with flexible funding for planning, technical assistance, training, evaluation and convening activities.

II. Introduction

The Community Access Capital Grant program of the Mount Hood Cable Regulatory Commission (MHCRC) promotes the use and availability of advanced cable system technologies at low cost to public agencies and nonprofit organizations. In keeping with the larger purposes of the public and nonprofit sectors, the Commission seeks to achieve maximum public benefit with the grant program. The Community Access Capital Grant Program funds local projects that 1) improve delivery or increase the effectiveness of services; 2) reduce disparities in underserved communities; 3) improve community involvement in issues of importance to the community; and 4) reduce costs of public services or foundations.

By providing grants for capital costs, the grant program supports the development of an interactive, multimedia information infrastructure through use of cable system technologies that are accessible to all community organizations, local governments, schools and citizens of Multnomah County, Oregon. Community Access Capital Grant program investments have, to date, supported distance learning, Public-Educational-Governmental (PEG) Access television operations, school and community-based video/multimedia production facilities, robotic equipment installations in government meeting rooms, and Institutional Network (I-Net) connectivity. In addition to annual competitive grant rounds, the Community Access Capital Grant Program has sponsored special funding rounds to explore effective uses of innovative technologies for the public benefit.

Purpose of the Evaluation

With the grant program now in its fifth year, MHCRC commissioned a study to evaluate the effectiveness of its grant program and to provide information that will guide the Commission's future funding decisions. In particular, the Commission sought to better understand the impact of the grant program on grant recipients, their constituencies, and other participating organizations—including gleaning lessons learned that will inform the evolution of the program for maximum community benefit. The scope of the evaluation includes an analysis of the grant program's funding patterns and grant-making processes.

Capacity of the Evaluators

Hi-Beam Consulting has been commissioned by the MHCRC to conduct the evaluation of its grant program. Hi-Beam is an information-based company in San Francisco that specializes in the evaluation of large-scale technology programs across the United States for nonprofit organizations and public agencies. Principal evaluators for the MHCRC Community Access Capital Grant Program Evaluation are Kathleen Tyner, Hi-Beam's CEO and president, and Paula Manley, a researcher and organization development consultant to the media arts fields who is based in Portland.

Report Organization

The report begins with an *overview of trends in technology grant making* literature to contextualize the evaluation and a review of the evaluation's *methodology*. *Findings* are then presented in three parts: results of the documentation review, results of interviews with MHCRC grantees, and results of the focus groups with grantees and potential grantees. All findings are considered in the *discussion* portion of the study, with an emphasis on the grant program's funding patterns and impacts, lessons learned, grant making processes, and emerging issues. Finally, the report concludes with a series of *recommendations* for future grant making.

III. Overview of Trends in Technology Grant Making

Grant Making as a Vehicle for Furthering the Common Good

The rationale for technology grant making is rooted in the larger purposes of the public and nonprofit sectors: serving the public interest and providing for the common good. Representative of many in the philanthropic community, the Funding Exchange (2003), a network of progressive foundations, articulates an underlying vision for grant making that:

- Builds community-based responses, not solutions that affect just a few individuals and leave the underlying social problems intact.
- Change attitudes, behaviors, laws, policies and institutions to better reflect the values of inclusion, fairness, diversity and opportunity.
- Insists on accountability and responsiveness among institutions, including the government, large corporations, universities and other entities whose policies and actions profoundly affect the living conditions of individuals and communities.
- Expands the meaning and practice of "democracy" by involving those closest to social problems in determining their solutions.

To what extent do grant making patterns currently reflect this vision? A recent poll of nearly 200 grant makers (Grantmakers for Effective Organizations, 2003, 8-9) suggests that while accountability is already emphasized within grant making, there are gaps between the current reality and desired future of grant making in other key areas. In particular, grant makers said they:

- Currently support *programs* and desire to provide more support for organizational *capacity building*
- Currently focus on *short-term needs* and desire to provide more support to *long-term solutions*
- Currently make *donor-driven decisions* and desire more *community-driven decision making*
- Currently support *short-term impact* and desire to more strongly support *lasting and systemic change*

Success Factors in Technology Funding

Previous research suggests that grantees are most successful when technology-related funds are directed within a holistic context that includes six aspects:

- *Determined and committed leadership*
  A study of 70 nonprofit organizations found that in addition to staff leadership, nonprofit board involvement in technology decisions had a significant positive influence. The existence of a board technology committee was highly correlated with best practices in technology management (Forster, 2003, 11-12). A steering committee with decision-making authority was also associated with successful projects (Gamble-Risely, 2003, 12).

- *A strong, involved consortium of mission-driven stakeholders*
  Most studies suggest that collaboration with diverse, outside partners builds momentum. Funders' invitations of proposals from collaborative groups have the potential to serve more organizations (Osten, Smith & Stuart, 2003). Collaborative projects often increase efficiency and reduce expenses, while helping to coordinate the project and leverage financial, technical and human resources. Evidence suggests that effective partnerships require that leaders' have positive outlooks about collaboration and that partners maintain ongoing communication (Gamble-Risley, 1-6).

- *An infrastructure that includes people, knowledge and skill attainment, as well as integrated technology networks*
  Adequate training for technology-use, including the ability to retrieve and make sense of information, contributes to successful outcomes. This includes the need for technical support intermediaries who are not merely "accidental techies" with aptitude and interest, but who also have a formal, dedicated support role in the technology implementation process (Forster, 7, 10-11). Studies consistently recommend that funders increase community capacity for technical support (Osten et. al., 2; Chan, et. al, 2001, viii). In addition to technical training, research has shown that technology alone cannot deliver public benefit the without corresponding 21st Century literacy skills necessary to access and make use of information (Partnership for 21st Century Literacy Skills, 2003, 4-5).

- *Adequate technology planning within an integrated, organizational planning process*
  One study noted that although technology planning is a vital ingredient for effective uses of technology, fewer than half of the nonprofits sampled plan strategically for technology function. Organizations with more than 20 employees were more likely to plan (Forster, 6). Another study recommends that funders consider evidence of adequate planning before grants are awarded, while balancing this with "meeting grantees where they are" (Osten, et. al., 28).

- *An incremental approach that maintains flexibility for change*
  A study of award-winning government technology projects found that successful projects designed and built their systems incrementally with enough flexibility for change (Gamble-Risley, 14). Projects were built up from a small scale, or with an initial pilot project, and made use of teams that learned to compromise on the process at the right time to meet deadlines (16, 24).

- *Evaluation and assessment strategies that inform implementation and program improvement*
  Researchers note that "most technology-related grant making has not been adequately evaluated to determine its impact" (Osten et. al, 7). Funders are often reluctant to fund assessment and evaluation activities. "At least one reason given for this is a fear of appearing too punitive to grantees…The irony is that funders [and grantees] will only be more willing to support advanced technology when both understand its role in achieving programmatic outcomes and organizational effectiveness" (15). Numerous studies and demonstration projects suggest evaluation as a required program improvement strategy to

identify opportunities for collaboration, collect lessons learned, and help funders and grantees to make the most of limited resources (16). Suggestions to strengthen assessment and evaluation within technology grant making include developing tools and clearinghouses; providing technical assistance; convening grantees and disseminating lessons learned.

Challenges in Technology Grantmaking

Research on technology grant making has identified several recurring challenges:

- *Funding, staffing, and integration*
  When asked to report their biggest challenge with technology, nonprofits reported funding, time constraints, staffing, and maintaining integrated databases of information about stakeholders, programs and services (Forster, 23).

- *Hardware and training needs*
  Different-sized organizations find the barrier to better technology use in different places. Larger organizations report that they need minor hardware improvements and major training improvements. Small organizations report the reverse: major hardware needs and minor training improvements. "Just as in human survival, there is a hierarchy of needs. If users don't have adequate computers, training them to use them is not a pressing issue" (Forster, 22).

- *Rigid eligibility criteria and red tape*
  One study notes that while there are some resources available to assist in obtaining technology, particularly in the governmental sector, "these resources do not always adequately meet community needs." The study sites numerous anecdotes documenting rigid eligibility criteria, "lengthy delays, and bureaucratic hassles" (Chan, et.al., 17).

- *Single year funding for multi-year projects*
  The preponderance of single-year, instead of multi-year support is challenging to some grantees. They cite restrictions "to making single year grants though most technology-related projects take two or more years to develop, deploy and evaluate and reach full potential" (Bayer, 7).

- *Under resourced grantee organizations*
  Although researchers recommend 6% of overall annual spending for technology, one study reported that organizations spend only 1 to 4 % (Forster, 11). A study of 38 foundations concluded that while technology investments have resulted in successes, there still is not *widespread, strategic* adoption and integration of technology in the nonprofit sector (Osten et. al, 2). "Most nonprofits still see technology as an efficiency or productivity booster and continue to misunderstand the total cost of technology ownership. As a result, nonprofits request grants for technology, but fail to include line items for planning, training and support" (10).

IV. Methodology

Evaluators gathered quantitative and qualitative evidence related to the effectiveness and impact of the MHCRC Community Access Capital Grant Program. Analysis of the data provides indicators of effectiveness and lessons learned that will inform the Commission's future grant making activities.

Evaluation Design

The evaluation plan incorporates the MHCRC's four major evaluation goals, each of which addresses a series of related research questions: 1) evaluation of impact of the Community Access Capital Grant investments for participating organizations, communities and individuals serviced by the projects; 2) examination of grant-funded project accomplishments, effectiveness and lessons learned; 3) analysis of MHCRC funding patterns and grant-making processes; and 4) assessment to assist the Commission in defining its funding strategy for future grants.

Evaluation Activities

Three major data-gathering activities were conducted between May and September 2003, including: a review of legacy documents related to grant activity, site visits and interviews with grantees, and two focus groups with grantees and potential grantees. Preliminary data was presented to the MHCRC Grant Program Committee on July 31, 2003 for review and feedback. The Committee worked with evaluators to refine indicators for the review of the Commission's grant making activities and to develop protocols for use in grantee interviews and focus groups with stakeholders. The summative evaluation report reflects the Committee's response to formative data.

Review of Legacy Documents. Evaluators worked with MHCRC staff to gather and organize document sets for twenty-five projects funded by the Community Access Capital Grant Program. These included nineteen completed projects from the regular competitive grant rounds, one active special project for residential broadband connectivity, and five completed projects of the I-Net Connectivity Capital Grant Program. All available documents were reviewed and analyzed. The projects' final reports and the MHCRC grant closure notices were used as the standards for scoring compliance issues and financial data.

Evaluators designed an instrument to score each project according to the following indicators: institution type, communities served, technologies used, public benefit impact, programmatic compliance, reporting compliance and financial compliance. The instrument is located in *Appendix C*. Scores related to compliance indicators were reported as yes, no and partially. When document sets were incomplete, or when projects were active, indicators were reported as unknown. Results of the documentation review for individual projects are located in *Appendix F*. Results were by tabulated by frequency using an Excel spreadsheet.

Interviews. Fourteen MHCRC grantees were interviewed representing sixteen of nineteen completed projects from the Commission's regular annual competitive grant rounds and one

special initiative project. Interviews with grantees built on the data gleaned through the legacy document review to learn more about the impact of grant investments, barriers and supporting factors, and lessons learned. The interviews also inquired into grantees' experiences with MHCRC's grant-making processes and explored emerging needs that could be addressed by communications technology. The interview protocol (located in *Appendix D*) was developed in consultation with the MHCRC grant program staff and the Commission's Grant Committee. Interviews were conducted via telephone and in person, including site visits, the last two weeks of July of 2003.

Focus Groups. Two focus groups with a total of seventeen educators and representatives of nonprofit organizations were conducted August 22 and August 27, 2003. Focus group participants were selected in consultation with the MHCRC staff to include a cross section of grantees from educational and nonprofit organizations, plus prospective grantees representing small and grassroots groups that have not to date been funded by the grant program. The purpose of the focus groups was two-fold: To explore how communications technologies may be used to support nonprofit and educational institutions in addressing community and education needs; and to identify real world barriers and challenges associated with the use of communications technology by nonprofit groups and education institutions. The focus group protocol is located in *Appendix E*.

V. Findings

A. Review of MHCRC Community Access Capital Grant Documentation

The documentation review findings present an overview of past grant making activities by institution type, technology type, communities served, public benefit, range of funding, and allocation of funding. In addition, the review offers an insight into impact through grantees' sustainability, feasibility, innovation, and other programmatic factors related to the project's implementation. Finally, the review provides insight into support factors related to grantee accountability and compliance.

Grant Making by Institution Type

The Community Access Capital Grant Program funds are awarded to educational, nonprofit and local government agencies. Evaluators analyzed the awards by institution type in three ways: a) for the nineteen completed projects in the annual competitive round and one active project in the special funding initiative; b) for the I-Net Connectivity Capital Grant Program; and c) for all twenty-five projects reviewed.

The types of institutions funded by projects from the annual competitive grant round and the special funding initiative are displayed in Table 1. For these projects, the majority of funding was awarded to public educational institutions (65%). Five organizations were nonprofit (25%). PEG Access providers represent two of the nonprofit grantees. One of the other nonprofit grantees is an active project from the special funding rounds. Local government agencies made up 10 percent of the Capital Grant Program grantees in the two funding categories. Table 1 displays the results.

Table 1: Institution Types for Capital Grant Program
Annual Competitive and Special Funding Rounds
(n=20)

Public Institution Type	by Frequency	Number (n=20)
Educational	65%	13
Nonprofit Organizations	25%	5
Local Government Agencies	10%	2

Evaluators also analyzed five completed projects of the MHCRC I-Net Connectivity Capital Grant Program, a special initiative to support I-Net connectivity capital expenses. Phase 1 funding was awarded to Portland Public Schools, Multnomah Education Service District (MESD), the City of Gresham, Multnomah County, and the City of Portland. With the exception of PEG access providers, nonprofits were not eligible for funding in the I-Net Connectivity Program. I-Net Connectivity grants were designed for institutions that already had some capacity, but wanted to ramp up their ability to access lower-cost or enhanced communications services through the I-Net/IRNE interconnection. The I-Net Connectivity Capital Grant Program specifically supports connectivity costs and edge devices for interactive data services.

Completed I-Net Connectivity Capital Grant Program projects benefited five public institutions displayed in Table 2.

Table 2: Institution Types for I-Net Connectivity Capital Grant Program
(n=5)

I-Net Connectivity Capital Grant Program Public Institution Type	by Frequency	Number (n=5)
Educational	40%	2
Local Government Agencies	60%	3

The five I-Net Connectivity grant awards benefited 134 institutional sites affiliated with these public institutions. An institutional breakdown of completed projects includes ninety-one public schools, twelve municipal agencies, fourteen health and social services agencies, six firehouses, six libraries, two police stations, two courts, and one transportation agency. The total awards by institution type for all twenty-five projects reviewed in the annual competitive grant rounds, the I-Net Connectivity Capital Grant Program, and the special funding program are displayed in Table 3.

Table 3: Institution Types
All Community Access Capital Grant Projects
(n=25)

All Public Institution Type	by Frequency	Number (n=25)
Educational	60%	15
Nonprofit Organizations*	20%	5
Local Government Agencies	20%	5

* Nonprofit category includes PEG access providers

The majority of assistance from the Community Access Capital Grant Program is awarded to educational institutions (60%), followed by local government agencies (20%) and nonprofit organizations (20%).

Funding allocations for awards by institution type were analyzed by actual funds expended for nineteen completed projects in the annual competitive grant rounds, five completed projects in the I-Net Connectivity Capital Grant Program and one active project in the special funding initiative. MHCRC Community Access Capital Grant funds supported these projects with a total of $2,027,565 in technology-related grant funding. Table 4 displays results of grant funding allocations by institution type for the twenty-five projects reviewed.

**Table 4: Allocation of Community Access Capital Grant Funding
by Institution Type
(n=25)**

Institution Type	Allocation of Community Access Capital Grant Funding by Institution Type (n=25)	
	Actual Grant Expenses	% of Total Allocation
Public Educational	$1,291,037	64%
Local Government	$405,696	16%
Nonprofit Organizations	$330,832	20%
Total All Institutions	**$2,027,565**	**100%**

Table 5 factors in combined grant and matching expenditures. With the exception of the I-Net connectivity grant projects, grantees were required to provide matching resources. The remaining twenty projects reported $2,819,230 in matching expenditures, with many grantees exceeding the match requirement. Due to a large match of $1,032,788 provided by the special initiative project, nonprofit organizations appear to provide the greatest percentage of the total "pot" of matching funds. However, educational institutions provided 37 percent of the total matching resources consistently across more projects.

**Table 5: Allocation of Community Access Capital Funding and Matching Funds
by Institution Type**

Institution Type (n=20)	Allocation of Funds for Completed Projects in the Regular Competitive Grant Round and the Special Funding Initiative (n=20)			
	Actual Grant Expenses	Actual Match Expenses	% of Total Matching Funds Supplied	Total Expenditures
Educational	$1,005,426	$1,039,838	37%	$2,045,264
Local Government	$284,287	$585,308	21%	$869,595
Nonprofit Organizations	$330,832	$1,194,084	42%	$1,376,191
Total Expenditures (n=20)	$1,620,545	$2,819,230		$4,439,775
I-Net Institutions (n=5)	**I-Net Connectivity Grant Program Funding (No Match Required/n=5)**			
Educational	$285,611	0	0%	$285,611
Local Government	$121,409	0	0%	$121,409
Total Capital Expenditures All Projects (n=25)	**$2,027,565**	**$2,819,230**		**$4,846,795**

When all reported expenditures from the twenty-five projects are considered, public education benefited from nearly $1.3 million in grant funds and nearly $2.3 million for technology-related projects when matching funds are included. Because there were numerous awards in the educational sector, funding can be analyzed in two categories: smaller grants below $75,000 and larger grants above $75,000. In the under-$75,000 category, grants ranged from a $3,395 grant

to Portland Public Schools for satellite dish upgrades to a $58,600 grant to Parkrose School District for an editing system. Grants in the over-$75,000 category ranged from a $102,518 award to Portland Community College for digital video production equipment to a $195,458 grant to Portland Public Schools for the Moshi Moshi/Hola Hola distance education project. The majority of grants over $75,000 were awarded to higher education institutions.

The MHCRC Capital Grant Program benefited local government agencies with over $400,000 in grant funding and over $991,000 in total expenditures for technology-related projects when matching funds are included. The smallest award of $3,307 went to the City of Portland Auditor's Office for an encoder to provided closed captioning services for the hearing impaired. The largest award in the government agency category, $280,980, was awarded to the City of Portland ComNet project for wide area connectivity for I-Net users to an Internet portal.

The nonprofit sector received nearly $331,000 in grant funds from the grant program. The six nonprofit organizations studied benefited from over $1.3 in expenditures for technology-related projects when matching funds are considered. Grants in the under-$75,000 category ranged from a $13,434 grant to Portland Cable Access for a mobile public address system to a $62,080 to Multnomah Community Television for an auto-camera system to provide enhanced local government meeting coverage. The largest grant in the nonprofit sector for a completed project was for $76,810 to Portland Cable Access for a digital editing/voice-over suite. The largest award for the active project in the nonprofit category was $148,725 for the special initiative by Innovation Partners; this project involves access to and use of AT&T's residential broadband Internet service to increase community involvement.

Grant Making by Technology Type

The Capital Grant Program's annual competitive grant rounds fund a diverse range of cable-related information communication technologies. In contrast to the annual competitive rounds of funding, special funding initiatives and the I-Net Connectivity Capital Grant Program are more narrowly designated for specific technology types.

Technologies for the regular competitive grants and the five I-Net Connectivity grants were analyzed in six categories. Explanations for each category are as follows:

> *Digital Video Production Equipment* refers to cameras, editing devices, and other digital video production equipment.
>
> *Production Equipment* refers to other non-video technologies that may be used for audio or special needs communications (e.g. an encoder for closed captioning).
>
> *Downstream Video Technologies* are transport systems that provide one-way access to distributed content.
>
> *Interactive Video* is defined as two-way communication via video technologies.
>
> *Upstream Video Technologies* are transport systems that provide access to one-way, locally-originated content.

Interactive Data refers to projects that use two-way, non-video data streams. This category includes projects funded for site connectivity to I-Net/IRNE service in the I-Net Connectivity Capital Grant Program.

Results of the review of technologies funded by the Community Access Capital Grant Program include nineteen completed projects in the annual competitive grant rounds and the five completed projects in the I-Net Connectivity Capital Grant Program.

Table 6: Technologies Funded
by Community Access Capital Grant Program Awards
Annual Competitive Round and I-Net Connectivity Capital Grant Program
(n=24)

Technologies Funded	by Frequency	Number (n=24)
Digital Video Production Equipment	38%	9
Production Equipment -- Other	13%	3
Downstream Video Technology	13%	3
Interactive Video	8%	2
Upstream Video Technology	4%	1
Interactive Data	25%	6

The majority of projects in the competitive grant cycle support digital video production equipment (38%). Projects related to the use of digital video equipment include distance education production equipment at Portland Community College, digital cameras and editing systems at public schools, and cameras for the Northwest Film Center's project serving Latino youth.

Twenty-five percent of the projects were for interactive data. The five completed projects in Phase I of the I-Net Connectivity Capital Grant Program are included in this category. Also included is the City of Portland ComNet's project providing regional, two-way data transport using I-Net connectivity.

Thirteen percent of the awards went toward other kinds of production equipment, such as a voice-over suite and a mobile public address system at Portland Cable Access, or the City of Portland's purchase of special needs equipment for the hearing impaired.

The study differentiates between upstream and downstream video transport systems. Thirteen percent of the systems funded by the grant program are downstream systems. Examples can be seen in Portland Public Schools' satellite dish upgrade for the delivery of educational content, and in the equipment purchased to enable broadcast of live language instruction programs (Moshi Moshi/Hola Hola) to elementary schools. Upstream video technology was used in one project (4%): Multnomah Community Television's East Metro Auto Cam cablecasts public meetings originating from the Troutdale City Hall and Multnomah County Board Room.

The use of two-way interactive video is represented by 8% of the grantees. An example of interactive video is the distance education program at Mt. Hood Community College.

Evaluators used grant closure notices to review financial data related to technology type for the nineteen completed projects in the regular competitive grant round and the five completed projects in the I-Net connectivity grant round. The special funding initiative is an active project and therefore was not included in the analysis. Because the interactive data category includes over $407,000 for all I-Net connectivity projects, it is the largest category, followed by digital video production equipment. Funding allocations by technology type range from $3,395 awarded to Portland Public Schools for a downstream video project to upgrade satellite dishes to a $280,980 grant to the City of Portland for the ComNet interactive data project.

Table 7: Allocation of Community Access Capital Grant Funding
by Technology Type
(n=24)

Technologies Funded	Allocation of Grant Funds for Completed Projects in the Annual Competitive Round & I-Net Connectivity Capital Grant Programs (n=24)	
	Actual Grant Expenses	**% of Grant Expenditures**
Digital Video Production Equipment	$ 388,248	21%
Production Equipment-- Other	$ 93,551	5%
Downstream Video Technology	$ 363,750	19%
Upstream Video Technology	$ 62,080	3%
Interactive Video	$ 283,211	15%
Interactive Data	$ 688,000	37%

In addition to the I-Net Connectivity Capital Grant Program funding of $407,020 one other large grant is represented in the in the interactive data category. An award of $280,980 to the City of Portland ComNet for wide area connectivity to an Internet portal resulted in .grant funding of $688,000 for interactive data technologies and total expenditures of almost $1.1 million when $411,170 in matching fund expenditures are factored in.

Digital video production equipment was the second largest funding category, providing nine projects with approximately $388,248 in Capital Grant program funds and over $900,000 in total expenditures when matching funding is considered. Seven of the digital video production equipment grants consisted of grants under $75,000 for public school projects. The eighth was for a nonprofit educational program at the Northwest Film Center for Latino youth for $29,783. The only digital video production grant over $75,000 was a $102,500 award to Portland Community College for production equipment for programs on a cable access channel.

Two secondary and one higher education projects were awarded $363,750 to utilize downstream video technology systems to distribute teaching and learning resources resulting in a total capital expenditure of $526,007. Two community colleges received $283,211 for interactive video system, resulting in a total of $710,270 in grant and matching funds for interactive distance learning systems.

The "Production—Other" category was a catch-all for non-video production equipment awards such as a two audio projects, including a voice-over suite and a mobile public address system, and special communication devices for the hearing impaired. These projects received $93,551 in MHCRC Community Access Capital Grant program awards, resulting in a total of $312,217 in grant and matching funds.

The upstream video technology category is represented by one project. Multnomah Community Television was awarded $62,080 to install a robotic camera system so that meetings in the Troutdale City Council Chamber and Multnomah County Board Room could be cablecast to citizens. This award resulted in a total of $110,076 including grant and matching funds.

Public Benefit of the Community Access Capital Grant Program

The Community Access Capital Grant program requires that grantees commit to one or more of the following public benefit areas: 1) reduce disparities of underserved communities; 2) support and encourage improved community involvement in issues of importance to the community; 3) provide non-for-profit or public services or functions less expensively than traditional means; and 4) to improve the delivery or increase the effectiveness of public or nonprofit services to the general public or to targeted individuals, groups or organizations. For many grantees, more than one public benefit area was identified, resulting in multiple responses in Table 8.

**Table 8: Public Benefit provided by
by Community Access Capital Grant Program Awards
(n=25)**

Public Benefit Area All Projects	by Frequency	(n=25)
Improved delivery or increased effectiveness of services	**80%**	**20**
Reduced disparities in underserved communities	**68%**	**17**
Improved **community involvement** in issues of importance to a community	**52%**	**13**
Reduced costs of public services or functions	**48%**	**12**

* Due to multiple responses and rounding, results do not total 100%

The majority of projects (80%) benefited the public through improved delivery or increased effectiveness of services. A majority (68%) reduced disparities in underserved communities. Over half (52%) supported community involvement in issues of importance to the community and nearly half (48%) reduced or avoided costs of public services or functions.

In addition to broad public benefit, the Community Access Capital Grant Program provided benefit to specific communities. Evaluators identified six communities specified in the 25 projects reviewed. Many projects reported benefit to more than on community. Table 9 displays the number and frequency of projects serving each of the eight communities.

Table 9: Communities Served
by Community Access Capital Grant Program Awards
Regular Competitive Program and Special Funding Initiative

Communities Served	by Frequency	(n=25)
Educational	76%	19
General Public	48%	12
Governmental Agencies	32%	8
Clients of Nonprofit Organizations	16%	4
Ethnically Diverse/Special Needs	12%	3
Video Producers/Audiences	8%	2

* Due to multiple responses and rounding, results do not total 100%

Public benefit accrued to a number of sectors of the community. The educational sector, which includes teachers, students, parents and schools, was the largest beneficiary (76%). Government agencies (32%) were represented in the regular competitive grant round and the I-Net Connectivity Capital Grant Program, including I-Net connectivity grants to Multnomah County, the City of Gresham, and the City of Portland. These awards supported libraries, health and social services, transportation, fire and police. As a result, they also indirectly and directly provided benefit to the general public (48%).

Clients of community-based nonprofit organizations were served by 16 percent of the projects. Fifteen percent (15%) of the projects reported that they served citizens with special needs and ethnically diverse communities, including a nonprofit project targeted to Latino youth and a governmental project for hearing impaired citizens. Ethnically diverse groups are also included in the general public category. Because of the high percentage of digital video equipment awards, video producers and their audiences were a direct beneficiary of the Community Access Capital Grant Program (8%).

Grantee Implementation of Capital Development Grant Program Awards

Evaluators used a documentation review instrument to analyze five broad implementation topics that are central to the MHCRC Community Access Capital Grant Program: 1) outcomes and barriers, 2) feasibility, 3) innovation, 4) replicability, and 5) sustainability. Nine indicators of success were identified for the topics, and projects were scored based on the information presented in their final reports. These were then compared with the grantees' original grant proposals. Table 10 displays results for of the nineteen completed projects evaluated from the annual competitive grant rounds.

Table 10: Program Implementation Indicators
By Frequency (n=19) *

Outcomes and Barriers	YES	NO	PARTIALLY	UNKNOWN **
Proposed Outcomes Met	84%	0%	16%	0%
Unanticipated Positive Outcomes Reported	47%	53%	0%	0%
Barriers to Success Reported ***	53%	47%	0%	0%
Feasibility	**YES**	**NO**	**PARTIALLY**	**UNKNOWN**
Timelines & Milestones	73%	0%	26%	0%
Adequacy of Proposed Budget	89%	0%	11%	0%
Innovation	**YES**	**NO**	**PARTIALLY**	**UNKNOWN**
Innovation	84%	16%	0%	0%
Replicability	**YES**	**NO**	**PARTIALLY**	**UNKNOWN**
Replicability	100%	0%	0%	0%
Sustainability	**YES**	**NO**	**PARTIALLY**	**UNKNOWN**
Will continue beyond the funding period	89%	0%	0%	11%
New Funding Leveraged	47%	37%	0%	16%

* Due to rounding, results may not total 100%
** Reports cite unknown or pending factors related to budget projections and grant proposals.
***Barriers include limitations outside grantees' control related to costs, staffing, timelines, etc.

Outcomes and Barriers. The majority (84%) of grantees met or exceeded the outcomes that they proposed in their original grant proposals. Nearly half (47%) derived unanticipated positive outcomes, such as the formation of new partnerships and the ability to leverage new funding. Over half (53%) identified barriers to success that could be used as lessons learned for program improvement and troubleshooting.

In three cases (16%), grantees partially met their proposed outcomes and records show that they communicated with MHCRC staff early and often in an attempt to trouble-shoot and overcome barriers. For example, Jefferson High School met three out of four outcomes related to the installation of its edit system. Barriers were identified including delays due to equipment unavailability, loss of access to I-Net and school reconstitution. In the case of the Mt. Hood Community College distance learning project, one outcome was unrealized, some were partially realized, and one was fully realized. Barriers for this project were identified, including the loss of partners, college restructuring and personnel change, the state budget crisis, and I-Net installation delays and technical system capability issues. Finally, in the case of Portland Cable Access digital editing/voice-over suite, the potential to facilitate optimal projected levels of programming was realized. However, the actual programming per year increases did not meet the original expectations.

Feasibility. Evaluators reviewed two factors related to the feasibility of the projects: 1) the projects adherence to proposed timelines and milestones and 2) the adequacy of their proposed budgets.

Most projects adhered to their proposed timelines and milestones (73%). One project for the City of Portland Auditor's Office was implemented prior to the timeline stated in the proposal. Twenty-six percent of the grantees partially followed their proposed work plans. They reported delays due to technical aspects of the project, quality of service issues, staffing problems and other issues outside the control of the grantee. In some cases, the timelines were revised with the assistance of MHCRC staff. For example, after the pilot class, a Portland Community College distance education project delayed further implementation of classes due to I-Net technical problems.

Proposed project budgets were also reviewed and compared with final expenditures for adequacy. Eighty-nine percent (89%) of projects proposed an adequate budget. Two project budgets were partially adequate, both due to the need for additional matching funds. The City of Portland ComNet's Regional I-Net project exceeded matching funds by over $50,000 due to system changes and timeline delays. The Portland Community College distance learning project exceeded matching funds due to additional personnel, fringe benefit and equipment costs.

One project contributed lower matching funds than proposed due to lower equipment costs than anticipated for Portland Public Schools satellite dish project. In this case, the grantee contribution was still well within the matching requirement.

Innovation and Replicability. Innovation and the ability to replicate and spread the lessons learned in these technology-related projects are an important aspect of the MHCRC Community Access Capital Grant Program. The majority of grantees (84%) reported that their projects were innovative. Those who did not (16%) were using technologies that already had a long record of use and testing in the field, such as video cameras. All nineteen of the completed grants analyzed (100%) were replicable.

Sustainability. Sustainability was reviewed based on two indicators: 1) the ability of the project to continue beyond the funding period and 2) the ability of the project to leverage new funds. Eighty-nine percent of the projects reported that they would continue beyond the grant period. Two were uncertain. For example, the City of Portland Auditor's Office project providing closed captioning for hearing impaired citizens is contingent upon future city-allocated funding. The Reynolds High School Cameras and Equipment Project also reported uncertainty about its future. Nearly half of the grantees (47%) reported that they were able to leverage new funding to sustain their projects.

Grantee Financial Accountability and Reporting Compliance

Evaluators analyzed document sets from nineteen completed projects in the annual competitive grant rounds to assess the timeliness, adequacy and accuracy of required program reports and evaluation reports. These documents included interim reports, final reports, financial reports, memos and notes. As can be seen in Table 11, reporting and evaluation compliance are uneven.

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Table 11: Reporting Compliance Indicators
By Frequency (n=19)

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Reporting Compliance Indicators	YES	NO	PARTIALLY
Interim Report Deadlines Met	37%	11%	53%
Final Report Deadlines Met	48%	26%	26%
Adequate Financial Reporting (e.g., Clear and Accurate)	74%	5%	21%
Evaluation Implemented	47%	26%	26%

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* Due to rounding, results may not total 100%

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Interim Reports. Grantees were required to submit several interim reports. Thirty-seven percent of the grantees met the interim reporting deadlines. Over half (53%) partially met the deadlines, by submitting two or more reports past the deadline. Records indicate that eleven percent of the grantees missed the deadline for interim reporting, sometimes by months. Others in the "no" category submitted incomplete reports.

Final Reports. Nearly half (48%) of the projects submitted timely final reports. Several submitted reports slightly beyond the deadline (26%), or submitted their reports in piecemeal fashion, such as when a financial report lagged behind the narrative report. Twenty-six percent seriously missed the deadline for their final reports, some by several months. Three of these were educational institutions and one was a governmental agency.

Financial Reports. Evaluators looked at the adequacy of financial reports as a grant management issue. The majority of grantees provided clear and accurate financial reports (74%). Twenty-one percent (21%) provided partially adequate financial reports. The partial reports included reports with did not use the MHCRC recommended reporting forms, did not include all invoices and receipts, or produced only invoices and receipts. One education project (5%) filed an inadequate report with unresolved and unexplained financial discrepancies.

Evaluation Reports.   In final reports, forty-seven percent of the grantees reported that they implemented their original evaluation plans. Twenty-six percent (26%) of grantees either stated that they did not conduct proposed evaluation activities or provided no evidence of evaluation findings in the final report. Another twenty-six percent (26%) referenced evaluation findings to various degrees, indicating that they partially implemented their original evaluation plans. Some of the grantees who partially implemented their evaluation plans stated in final reports that their plans were scaled down. The reasons cited for not conducting the proposed evaluation plan, or for partially conducting it, were inadequacies of staff, time or budget.

B. Findings from Interviews with MHCRC Capital Grant Program Grantees

Fourteen MHCRC grantees were interviewed representing sixteen of nineteen completed projects evaluated from the Commission's regular annual competitive grant rounds and one special initiative project. Building on the data gleaned through the review of MHCRC grantee documents, individual interviews with grantees were conducted to learn more about the impact of grant investments, and the key barriers, supports, and lessons learned in the accomplishment of projects. The interviews also inquired into grantees' experiences with MHCRC's grant-making processes including the pre-application and application process, project budgeting, evaluation and reporting. Finally, grantees were asked about emerging needs in their communities that could be addressed by communications technology.

Impact of Grant Investments

Interviewees reported a variety of community and organizational impacts resulting from their grant-funded projects. A partial list follows:

- *Improved community access to local government* resulted from grant projects that provided closed captioning of Portland City Council meetings for the hearing impaired population, improved government meeting coverage using multi-cam robotic systems, and enhanced citizen access to government information through broadband Internet service and web-based tools.

- *Enhanced access to higher education* was furthered by grant projects that provided interactive distance learning infrastructure and a pilot class, more varied classroom sizes to accommodate more distance education students, and expanded access to community college for those who were not previously being served.

- *Second language instruction in elementary schools* was made possible in part due to the seed money provided by the MHCRC grant program. 23,000 students are taking part in a sequenced program to build language skills as part of the core curriculum in elementary schools throughout the school district. Student learning assessments are positive.

- *Affordable, high-speed, countywide network connectivity for public agencies* is the result of grant investments that made wide area network connectivity available at a very low price for I-Net users.

- *Enhanced media education opportunities for high school and community college students* have resulted from grant investments in digital equipment for high school media studies and media production classes and a college level video internship program.

- *Youth development* has been supported with grant investments in a multi-year, community-based, training and video production project involving Latino youth. Due to its initial success, the project has expanded to include several partners and additional community resources. According to the grantee, "The project has challenged us to think not just in small increments, but to think broadly about longer term impact we want to have, to identify a clear need and think of other resources that can be brought together."

- *Improved signal quality and an increased number of educational and public service productions* are available on PEG access channels as a result of grant support for satellite and production equipment. Productions include local documentaries, community event coverage, and satellite offerings such as Chinese language programming and Annenburg educational programming.

Key Supports

The most important supporting factors in the accomplishment of grant-funded projects were reported by interviewees as follows: cooperation of partners (cited 8 times); ability to leverage other resources (cited 4 times); political support (cited 2 times); and the vision and flexibility of the MHCRC in light of changing circumstances and needs (cited 2 times). The following are specific examples of factors that supported the accomplishment of their projects as relayed by interviewees:

Cooperation of Partners
- Cooperation among City of Portland agencies involved in an ad hoc project team.
- Collaboration among I-Net stakeholders during the project.
- Cooperation of local government partners.
- Partnership with the Oregon Council on Hispanic Advancement.
- Partnership with Portland Cable Access, which gave the students a venue to share their videos, a connection with the larger community, and access to a studio environment and additional equipment.
- Partnership with Multnomah Community Television, providing students with training, technical support, and tools for evaluating student video stories.
- Relationship of project partners (PSU and PCC) that developed through the project, and the joint learning and trouble-shooting.

Ability to Leverage Other Resources
- Other project funding that was leveraged based on grant resources.
- Access to federal vocational dollars to upgrade the equipment purchased with grant funds.
- Support from teachers on special assignment, who provided in-kind time to develop programming.
- In-kind engineering support to examine the I-Net infrastructure.

Political Support
- Strong and vocal support for the project from the superintendent.
- Political will on the part of the City of Portland to establish IRNE (the City's fiber network).

Vision and Flexibility of MHCRC
- The vision of the Commission and the collaborative style of the Cable Office staff: "When we approached MHCRC, this project was out of the scope of what was anticipated for the grant program."
- The flexibility of the Commission staff in recognizing project difficulties and extending the timeframe for project completion.

Key Barriers

Interviewees reported encountering the following key barriers in their accomplishment of grant-funded projects: internal organizational issues (cited 12 times); equipment related issues (cited 7 times); and problems with the cable operator and/or cable system capability (cited 5 times). Other barriers included the recession and state budget crisis (cited 3 times) and socio-economic issues (cited 3 times). Interviewees representing three (3) projects said they experienced no barriers.

Internal organizational issues included restructuring; changes in school principals and a college president; inadequate transitioning of grant project knowledge during management turnovers; college departments operating as silos rather than working together; a lack of advance planning regarding integration of equipment systems within existing operations; and a cumbersome institutional accounting system, which made financial reporting difficult. Interviewees involved with school projects also highlighted the lack of understanding or appreciation for technology among administrators and teachers, and inadequate technical and project management support for the teachers responsible for implementation.

Equipment-related issues included late deliveries, problems with equipment operation (system crashes), inadequate storage capacity for video files, and a computer virus problem. In one instance, production gear for a classroom-based grant project arrived six to eight weeks into the school year due to the timing of the grant cycle and the lead-time needed for ordering equipment. In most cases equipment issues were resolved satisfactorily and project deadlines were readjusted as needed in cooperation with the MHCRC staff.

Problems with the cable provider and system capability included substantial delays with I-Net installation and technical problems with the bi-directional capability of the system, which led to scaling back the scope of distance education projects and adjusting timelines in concert with the MHCRC staff. Another barrier was AT&T's opposition to establishing an I-Net connection with the IRNE fiber loop, which was addressed with strong political support from the City of Portland and the fortuitous timing of the transfer of ownership of AT&T to Comcast.

Barriers related to the *recession and state budget crisis* were identified by interviewees including one instance in which a key industry project partner (Fujitsu) closed shop and other examples in which education budget reductions squeezed the capacity of educational institutions through staffing cutbacks and continual restructuring. In most cases grantees worked closely with the MHCRC staff to readjust project deliverables and deadlines.

Socio-economic issues included barriers to participation by youth with family obligations, such as needing to care for younger children or work in the family restaurant; and a lack of computer access for low income project participants. Grantees initiated creative solutions to these barriers, including providing paid childcare for project participants, and involving a project partner who provided donated computers to low income households.

Major Lessons Learned

When asked if they would do anything differently if they had the opportunity to re-do their grant-funded projects, interviewees representing twelve projects responded that they would make changes, while five said they would not make changes. Responses from grantees who reported they *would* make changes emphasized the following lessons learned: Be cautious with new (unproven) technology; take time to assess needs and involve stakeholders in project planning; build internal support; conduct research and provide for training and integration; and start small and build incrementally.

Be cautious with new (unproven) technology. Grantees working with emerging technology and unproven technology reported that they have learned to be more cautious. Two grantees commented based on their experiences with projects that were challenged by installation delays and technical problems with the bi-directional capability of the I-Net. One said: "In the future I would not tie a project to specific technology [I-Net] unless that technology was tested." The other commented, "I would never again write a grant to use a system [I-Net] that did not yet exist. I would not be on the edge again." A grantee involved in a digital equipment project echoed a similar refrain: "The [digital production] technology emerged as this project emerged. I would do more research and postpone technology purchases to assure that bugs are worked out and that the technology will be relevant for a few years."

Take time to assess needs and involve stakeholder in project planning. One grantee said, "In hindsight I would have done more work up-front to identify the strengths and needs of each of the institutional partners—what each partner needs and is uniquely qualified to provide." Several grantees said they had learned the importance of increasing partner and stakeholder involvement earlier in their projects. One said that future projects should "build in outreach and marketing from the beginning rather than using a 'build it and they will come' approach." Another grantee commented, "I would focus more on partnerships and programming and less on technology."

Build internal support. The importance of generating internal support earlier in projects was emphasized by grantees involved in education. One said, "I would have communicated with teachers and administrators earlier in the process to get their support," while another commented on the need to "do more work up front to nurture faculty connections and have [shared goals concerning] the curriculum as more of a driver of the project."

Conduct research and provide for training and integration. Some grantees noted that in the future they would devote more time to researching equipment options and planning for integration of equipment within their operations. One grantee specified that more research would most likely have led to different camera purchases. Two grantees emphasized the need to plan for staff training as part of integrating new equipment within operations.

Start small and build incrementally. A grantee involved in a large project with several partners said that in the future he would "break the project into pieces rather than taking on such a large effort." Another grantee suggestion was to build a project based on an initial pilot project.

Dissemination

Interviewees cited eleven examples in which they have shared what they have learned internally and twelve examples involving disseminating project information with other organizations. One grantee indicated that the project did not involve sharing lessons learned.

Examples of *external* dissemination included:

- Technical specifications and teaching principles were shared with colleagues in other school districts including Woodburn and Hillsboro (OR) and Evergreen (WA).

- Student presentations were made to parents and school groups.

- Project was featured in publications including journal articles (in the U.S. and Japan), Internet newsletter, and a new book, *Model Early Foreign Language Programs.*

- The technical and staffing aspects of automated production systems were shared with peer organizations (locally, regionally and nationally).

- Conference presentations were made to media center directors of the Northwest.

- I-Net stakeholders conducted joint trouble-shooting on technical issues.

- 10,000 kits were distributed (including a compilation of student videos and a program guide) to schools, libraries, and youth organizations statewide. Each kit included a response card to find out who is using the materials and how they are being used.

- Projects were shared through students' participation in the Community Media Roundtable.

Examples of *internal* dissemination included:

- Grants office used lessons learned to improve financial tracking and reporting systems.

- Grantee took part in meetings and made presentations to gain the support of principals.

- Project implementation involved cross-departmental learning and trouble-shooting (e.g. Computer Services and Distance Education departments).

- Team members analyzed the process and difficulties encountered in the project—a major learning experience.

- Project was shared as part of planning for the addition of a new class within the media studies curriculum.

- City of Portland departments had deep learning through the involvement of staff in project committees.

Project Sustainability

Interviewees representing seventeen grant-funded projects reported that fourteen of these projects are continuing fully, two are continuing in part (e.g. technology is maintained and used by the institution, but not for the original grant purpose) and one project has not continued. Three interviewees noted inadequate resources for equipment/software upgrades and maintenance.

Interviewees identified fifteen examples of additional resources leveraged by grant investments including funding and in-kind resources.

Table 12: Additional Resources Leveraged by Grant Investments

Funding:
• City of Portland general funds
• City of Portland Police Bureau funds
• Foundation grants
• Federal vocational funding
• Oregon Dept. of Education funding
• Distance learning grant funding
• Small amount of individual donations
• Project funds from other college departments
• National Endowment for the Humanities grant
• Institutional dollars for technology upgrades
• Federal funds for additional equipment
• User fees (cited twice)
•
In-Kind:
• Software donated from Microsoft
• New software from institution
• Staff technical expertise

MHCRC Grant Making Processes

Pre-Application and Application Processes

Interviewees reported that they learned about the MHCRC grant program through colleagues (cited 5 times), through their involvement or awareness of cable franchising and the work of the MHCRC (cited 5 times), or through mail or email outreach notices (cited 2 times). One grantee learned about the grant program through a blurb in the Oregonian and another learned of the program indirectly from a parent who was looking for resources for the school.

Twelve of the interviewees reported that the pre-application and application process was clear. However, three of the twelve found the process "daunting" or "overwhelming" and two others reported being confused by the funding criteria and budget section of the application.

Interviewees reported that conversations with staff were the most helpful aspects of the process (cited 10 times), followed by the informational meetings for prospective grantees (cited 4 times), the thorough and detailed information packet (cited 3 times). One grantee reported that hiring a grantwriter was the most helpful aspect of the process, while another cited the pre and post award meetings with staff. Almost all interviewees reported that they talked with staff prior to submitting an application and all but one was aware of the informational meeting for prospective grantees.

Project Budgets

Interviewees reported that fourteen project budgets were realistic and three were not. However, when prompted, interviewees also noted ten instances in which matching resources were not fully reported. Comments from interviewees concerning project budgets that turned out to be unrealistic follow:

- Some of what we budgeted involved guessing due to changing technology. Some items ended up being cheaper and some ended up being more expensive. It took twice as much staff time as anticipated.

- Our big overage was equipment costs. AT&T changed its design mid-stream and we had to spend more on equipment than planned. This was covered by another [MHCRC] grant cycle, which made edge devices available to stakeholders; this allowed them to get on the network faster, generating user revenues faster.

- The budget included guesswork because we didn't know what the actual costs would be. We were not ready for all the money that was allocated to us through the grant [Note: A smaller amount was spent than the allocated amount].

Comments from interviewees concerning underreported match resources follow:

- It took more staff time than reported. We reported staff time minimally to show that we met the match requirement.

- We put more staff time to put it together than anticipated and some of the engineering time was not included in the report.

- The project required considerably more staff time than we reported to address equipment crashes and to train staff.

- We had more staff time and more equipment upgrades than were reported.

- The match was fully reported other than IT staff project management time which was not anticipated and not reported.

Reporting

Nine interviewees said the reporting process was not helpful to them for "problem-solving, trouble-shooting or program improvement," while five reported that it was helpful. While some grantees found the reports "onerous," others said they were useful for project documentation and keeping teams focused and on task. Some grantees questioned the value of reports in promoting program improvements. One typical comment was, "By the time we wrote the reports, we had already made improvements as needed."

Evaluation Plans

Most interviewees reported that their evaluation plans changed during the course of project implementation. Of the seventeen projects represented by interviewees, one evaluation plan was dropped, eight were scaled back or modified, and four were completed largely as envisioned. For four projects, interviewees said they were not sufficiently involved with developing or implementing evaluation plans to comment.

Several grantees reported that evaluation was a helpful aspect of grant projects. One said, "It was useful for us and a good process. Hiring an external evaluator was valuable. It would have been more valuable to bring the evaluator in earlier." Another grantee reported, "The evaluation plan was a worthwhile part of the project. We made sure to make it as realistic as possible. After we got the grant, we had staff changes and equipment arrival date changed so we adjusted it, in consultation with cable office staff, based on reality. The evaluation plan helped us stay on schedule and it helped our team cohesiveness."

Several grantees reported struggling with their evaluation plans. One said, "What was contemplated in the application was too ambitions. We didn't have the resources to complete it." Another commented, "It was hard, which says as much about me as the process. I'm very hands-on. We overstated what was possible to do with evaluation. I have many responsibilities and as a teacher it is difficult to get release time."

Other grantees reported that their evaluation plans turned out to be worthwhile, despite unanticipated changes in their projects. "It turned out to be useful to create some evaluative tools," one grantee said, noting that "the expected outcomes materialized with the exception that one planned evaluation measure became irrelevant due to equipment changes." Another grantee found that "there were so many changes in the project beyond our control that the original evaluation plan was not implemented. We did learn from the experience the final evaluation was valuable."

Staff Support and Process Improvements

Interviewees overwhelmingly reported that MHCRC staff members are supportive partners in problem-solving, trouble shooting and making program improvements. One grantee said the issue of staff support was not relevant due to the simple, straight-forward nature of the project. Typical comments about staff support included: "They are responsive, supportive, knowledgeable and helpful," and "They are terrific and responsive. I have the highest regard for the staff."

Interviewees' comments and suggestions to improve MHCRC's grant making processes included: Simplify and customize the granting system; provide opportunities for grantees to learn from each other and from the MHCRC; streamline reporting; and provide technical assistance. Specific grantee suggestions follow.

Simplify and Customize the Granting System

- Simplify the application categories.

- Create a two-tiered granting system with reduced application and reporting requirements for small projects under $20,000.

- To promote involvement of more schools and teachers, create a package that provides equipment, teacher training and support from technical professionals (like MCTV).

Provide Opportunities for Grantees to Learn from Each Other and from the MHCRC

- Make use of the community media roundtable to identify common needs and help set up potential partners for the grant program.

- Consider a semi-annual meeting for grantees as a group to learn from each other and talk about where we're going with the grant program in the next five years. Help people see how they fit and use group meetings as a vehicle for ongoing community needs assessment and idea exchange.

- Open up the panel review process (open meetings) to enable grantees and prospective grantees to learn from that part of the process.

Streamline Reporting

- Lower the bar on reporting requirements to assure accountability without so much paper work.

- Simplify reporting. Create more "templated" reporting.

- Clarify the financial reporting requirements (e.g. provide a rationale for why itemized equipment lists are needed).

- Set up a system with less reporting requirements for simpler, lower dollar projects.

Provide Technical Assistance

- Consider funding evaluation as part of the grants.

- For I-Net projects, assure that grantees have adequate project management support (e.g. provide a "telecom project manager" or technical assistance).

Other

- Rethink the definition of "capital" to expand the range of opportunities, especially regarding funding for (1) staff training, and (2) community needs for assessment and planning processes that could strengthen the design and viability of projects. There is a tendency to "go for equipment" rather than to start with a clear community need.

- Assure that website is totally up to date.

Emerging Areas of Need

Interviewees were asked how technology could help address needs in the communities they serve, and what advice they would give to a technology grant maker about emerging areas of need. Their responses follow:

Leading Edge Applications

- Expand the realm of qualified activities beyond traditional cable TV applications. Look at the Internet hauling capabilities of the cable system….Think of the cable system more as a network capable of carrying a wide variety of info, and less as a cable TV system.

- Support projects that are future-focused. The future will not involve "video" as we know it today, but a digital stream that includes print, moving image and audio program information—multiple streams.

- There is a need to link classroom distance learning with web-based training (e.g. getting supplemental materials and extension activities on the web for students).

Multilingual Communications

- With the population becoming more diverse (one school in the district has children with 11 different dialects), there is a need for multilingual channels of communication. Explore how to serve non-English speaking constituents.

- Support non-English speakers in communicating among themselves.

- Our project area includes 23 different languages. Language is a barrier, including assuring accurate translation on the telephone and computer.

Regional Communications Infrastructure

- The crying need in the metro area is for a regional infrastructure that is tied together in a high capacity network and not confined to the cable system area. Think regionally. The fundamental need is access to wide area networks for transmission of video throughout the region rather than to "islands."

- Work towards a tri-county wired region. Be less "cable-centric" and more in the universe of public sector technologists. Articulate a strategic vision for the I-Net and review it before each grant cycle. This would help align the I-Net with regional providers and could leverage other funds.

Professional Development for Public Servants

- Professional development is a huge need for teachers (e.g. computer-based professional development with video clips to reach more teachers on their own schedules).

- There is a need to make in-service training more accessible for teachers, government service providers, health care workers, and social service providers.

IT Upgrades and Maintenance

- There are so many changes in technology—even in the time from proposal writing to the implementation stages of a project. Be sure to ask grantees, how are you going to maintain and upgrade the technology? Software upgrades need to be built in from the start. Perhaps have some mechanism to fund upgrades through the grant program if certain criteria are met.

Other Emerging Issues and Needs

- Promote increased information sharing in communities based on interests and issues (rather than geography). Having the capacity to conference in groups will be important.

- Promote small, localized projects—especially those that enable students to develop their creativity.

- Support the availability of localized information in the event of disaster or other emergencies.

- Funding the community access provider (PCA) is important because that is part of the infrastructure our school depends on.

- Reach out to educators. For the foreseeable future schools will not be able to fund those things considered "extras" such as media production gear. Students can benefit from these tools to learn story telling, critical viewing, and to help develop their voice instead of looking to media solely as consumers or to be entertained…. Be more proactive about pulling teachers in and helping them see the possibilities.

- Oregon's budget crisis gives us an opportunity to actively explore how our institutions can leverage resources, share audiences and share technology…Consider giving additional weight to collaborative efforts.

- Keep the core values that have driven the grant program: benefiting people not technology for technology's sake, democratic participation and voice, a functional social structure, better communities, civility and understanding of cultural differences.

C. Findings from Focus Groups with Current and Potential MHCRC Grantees

Representatives of seventeen educational and nonprofit organizations participated in two focus groups to help identify real world barriers and challenges associated with the use of communications technology, and to explore emerging needs that could be addressed with communications technologies. Nonprofits participating included a grassroots immigrant group, arts and cultural organizations, PEG access providers, and an association of minority entrepreneurs and small business owners. Educational entities participating included a community college, school district, charter school and educational service district. Focus group participants included MHCRC grantees and potential grantees.

Barriers Associated with the Use of Communications Technology

Educators and nonprofit organizations both emphasized the challenges of funding technology—including hardware, software, staffing, and training. Adequate, up-to-date technology for teachers, schools and students is lacking, focus group participants said, noting inequities in technology—school-by-school and within student homes.

Representatives from nonprofit groups said they are over-stretched and under-resourced, making it difficult to provide adequate staffing and training for using and maintaining communications technology. Nonprofits said they lack in-house technical support with software and engineering. They agreed that "nonprofits need more training and help with technology planning—not just the availability of technology." One participant commented, "There is often a perception that technology will solve anything, but it does not—internal education is needed addition to technology." There is often pressure on smaller organizations to have new technology available, one attendee noted, yet many funders of nonprofit organizations will not fund capital costs.

Grassroots groups—particularly those working with new immigrants—have very basic needs with regard to technology, one focus group participant reported. For example, many new immigrants have never seen a website and do not know how email works. Language and cultural barriers exacerbate other technical and learning barriers.

Educators said that technology skills and awareness among administrators and teachers are lagging, and that students know more about technology than their instructors. "The pyramid of knowledge has been reversed," one focus group commented, with administrators at the bottom, teachers in the middle, and students are on top. Another participant noted that administrators are not knowledgeable enough about communications technology to make good technology decisions or appropriately support teachers in using technology in the classroom. Educators also noted a gender gap with few girls getting involved in using communications technology. They said current efforts to involve girls with using technology are falling short. Finally, educators highlighted the importance of bringing "techies" and content developers together to work as co-developers to determine: "What is the need?" and "What can this technology provide?"

Other challenges and barriers associated with the use of communications technology highlighted by focus group attendees included institutional silos that make internal planning difficult, and the lack of cable system interconnection with Washington County.

Suggestions for Addressing Emerging Needs and Issues

Looking to the future, educators and nonprofit group taking part in focus groups discussed how communications technology could help address community needs and support the work of their organizations. Their ideas included:

• Provide targeted support to constituencies that are falling behind in their use of communications technology such as new immigrants and girls.

• Support efforts to provide curriculum at a distance via communications technology.

• Provide nonprofit organizations with access to IRNE (the City or Portland's fiber loop), the gateway to the I-Net, making low cost voice, video and data applications possible for nonprofits as well as public agencies.

• Support educational and cultural institutions in "remaining firmly in the public, not-for-profit sector" rather than becoming "privatized and homogenized based on the preferences of corporate funders."

Focus group participants also offered specific suggestions relating to the future of the MHCRC grant program:

• Share lessons learned among grantees. Provide opportunities to exchange best practices.

• Establish a community needs agenda by bringing stakeholders together for dialogue. This includes encouraging partnerships on small projects and using these as "small wins"—a basis for getting people working together on broader and longer-term goals.

• Provide a mechanism for funding small projects in a timely fashion, particularly project-based learning opportunities (e.g. through the schools) that often have a short amount of lead-time.

VIII. Discussion of Findings

The MHCRC Community Access Capital Grant Program funds a diverse array of small and large projects, creating an important test-bed that makes advanced cable system technologies available to the community at low cost. Twenty-five grant projects were reviewed as part of this evaluation, representing an investment of more than $2 million in grant program funding; when institutional matching funds are considered, the total is over $4.8 million in capital resources. These grant funded projects employed a wide range of cable-related technologies to benefit a diverse public, including educational, nonprofit and local government agencies in Multnomah County.

Funding Patterns and Impact of the Capital Grant Program

Results of Grant Investments, How Grant Funds were Spent

The educational community of students, parents, teachers and schools is the largest beneficiary of the MHCRC Community Access Capital Grant Program. Seventy-six percent (76%) of all grant awards reviewed resulted in educational benefits for students, teachers, parents and schools. Forty-eight percent (48%) of the projects serve the general public, and thirty-two percent (32%) benefit governmental agencies, which in turn also provide more efficient and cost effective services for the general public. Sixteen percent (16%) serve clients of nonprofit organizations. Twelve percent (12%) of the grantees reported service to traditionally underserved groups such as ethnically diverse communities or citizens with special needs. With several grant awards funding production equipment, video producers and their audiences (8%) benefit from the grant program.

When general institution types are reviewed, educational institutions received the majority (60%) of grant funds to improve their technological capacity. In the face of budget shortfalls, grant program investments enable public schools and institutions of higher learning to use 21st Century literacy tools that enhance teaching and learning opportunities, reduce the costs of service, and improve school efficiency. Advanced digital video production tools provided by the grant program enable students to demonstrate their learning with the full range of contemporary communication tools and to participate as citizens in the public sphere through the distribution of their creative products. Institutions of higher learning, as well as public schools, use the tools provided by the grant program to reach more students through distance learning.

Local government agencies represent twenty percent (20%) of grant projects. The grant program enables municipal offices, health and social service agencies, firehouses, police stations, libraries, courts and transportation agencies to better serve the public by offering wider, lower-cost access to services through the uses of advanced communication technologies. Community Access Capital Grant funding also is used to reduce disparities in government service to underserved communities. For example, the City of Portland

Auditor's Office was able to install closed captioning equipment to better serve hearing impaired citizens.

Nonprofit organizations, including PEG Access providers, make up twenty percent (20%) of the grantees. These grants include projects that reached underserved communities, such as the Northwest Film Center's award for digital video production equipment for an educational project involving Latino youth. Another nonprofit grantee, Innovation Partners, uses a special initiative grant award to improve community involvement through the use of residential broadband Internet technology. With a grant-funded robotic multi-camera system, Multnomah Community Television cablecasts local government meetings from Troutdale City Hall and the Multnomah County Board Room, improving citizen access to local government. Other grant awards to PEG access providers have provided equipment to support citizens and nonprofit groups in creating educational, artistic, civic and public issue oriented video projects for the cable system.

The majority of projects in the regular competitive grant program (80%) benefited the public through improved delivery or increased effectiveness of services. A majority (68%) reduced disparities in underserved communities. Over half (52%) supported community involvement in issues of importance to the community and nearly half (48%) reduced or avoided costs of public services or functions.

Evaluators analyzed twenty-four completed projects by technology type. Because the interactive data category included over $407,000 for all I-Net connectivity projects, it was the largest technology category, followed by digital video production equipment (21%).

Downstream video technologies are transport systems that provide one-way access to distributed content. Downstream video technologies were the focus of nineteen percent (19%) of the projects. Interactive video was used by fifteen percent (15%). Other types of production equipment, such as an audio suite and special equipment for hearing impaired citizens made up only five percent (5%) of the projects. Upstream video technologies are transport systems that provide access to one-way, locally-originated content. Upstream video technologies are represented by one project (3%).

Extent to Which Grant-Funded Projects Accomplished Their Goals

The nineteen projects evaluated from the annual competitive grant rounds demonstrate high levels of program success and a track record of commitment. Although over half (53%) of the grantees experienced barriers to the success of their projects, a large majority (84%) report that they overcame them to meet proposed outcomes. The remaining projects (16%) met many or most of the outcomes that they proposed. In addition, nearly half (43%) reported unanticipated positive outcomes, such as the formation of new partnerships, or the ability to leverage new funding. Many programs demonstrated commitment by exceeding the Community Access Capital Grant program's matching funding requirements.

The success of these projects has the potential to spread. All projects are replicable (100%) and a majority of the projects are innovative (84%) thus contributing to the knowledge, effective use and spread of cable-related technologies for the public good. The remaining projects (16%) effectively used traditional technologies in proven ways to enhance public benefit. More support for dissemination of success factors and lessons learned would help to spread best practices in the field.

Although projects were successful overall, anticipated timelines and milestones were only partially met by twenty-six percent (26%) of the completed projects in the annual competitive grant rounds. Some delays were due to circumstances beyond the grantees' control, such as institutional restructuring, staff turnover, problems with equipment vendors or the cable service provider, and budget shortfalls related to the overall economic recession. Also, with an emphasis on innovation, some grantees were working with new and unproven technologies. However, many delays resulted from factors that could have been addressed with more incremental and realistic planning for technology before the projects began.

Because of the MHCRC grant program provides for capital costs only, operational support—such as planning, staff time, technical expertise, training, evaluation and community outreach—is provided through matching resources. In interviews, many grantees reported that the projects took more staff time than anticipated, thus requiring more matching contributions than reported. Clearly, additional funding for support would contribute to program success.

Although the evaluators did not find a direct correlation between the size of the grant awards and overall program success, research indicates that small and large organizations have different needs and capacities. Based on reports from interviews and focus groups it is clear that smaller organizations generally lack adequate expertise in technology project planning and management. Evidence indicates that the grantees with less initial capacity and smaller grant awards would benefit from broader staff and peer support, as well as from a streamlined application and reporting process.

How Grant Funds Leveraged Other Resources

In written reports, nearly half (47%) reported the ability to attract and leverage new funding with the Community Access Capital Grant award with an additional sixteen percent (16%) actively seeking funding with proposals "in play" at the time of the evaluation. Grantees who participated in interviews, representing seventeen projects, highlighted fifteen examples of additional resources leveraged due to grant funds. Examples included foundation grants, a National Endowment for the Humanities grant, user fees, in-kind donations of software, federal vocational funding other governmental funding.

Extent to Which Projects Have Been Sustained

According to the document review, 89% of the nineteen completed grant projects expect to continue beyond the funding period. Grantees interviewed specified that two projects are continuing in part (e.g. technology is maintained and used by the institution, but not for the original grant purpose). It is noteworthy that some grantees emphasized that their institutions lack adequate resources to appropriately upgrade and maintain grant-funded equipment, a potential obstacle to long-term project sustainability.

Lessons Learned

Supporting Factors for Grantees

Cooperation of partners was paramount in the accomplishment of grant-funded project goals. Through working with partners, grantees accessed additional equipment resources, networks for outreach, and specialized expertise. Partnerships were important to large institutions as well as small organizations. For example, higher education institutions developed relationships through a distance education project enabled them to learn and trouble-shoot together. Smaller organizations benefited from the cooperation of PEG Access organizations as partners, enabling access to needed technical expertise, training and equipment.

Another supportive factor for grantees was the *ability to leverage MHCRC grant funding* to secure additional resources such as grants, general funds and in-kind donations. The *accessibility, knowledge, and helpfulness of the MHCRC staff* was acknowledged as a strong supporting factor by many grantees. Having internal *political support from top leaders* was an important factor for some of the large, complex projects funded by the grant program. For example, an ambitious distance education project was championed by the superintendent, which helped to preserve the program despite extreme internal budget pressures. The *vision and flexibility of the MHCRC* Commission and staff were also highlighted as key supports by grantees, due to the Commission's willingness to respond to emerging needs and changing conditions (e.g. creation of the I-Net Connectivity Capital Grant Program).

Barriers for Grantees

Chief among the barriers experienced by grantees in the accomplishment of project goals were internal organizational issues, equipment issues, and problems with the cable provider and/or the cable system's technical capabilities. Other barriers included the recession, state budget crisis, and socio-economic challenges experienced by those served by grant projects. Many barriers were addressed through the initiative of grantees and the support of the MHCRC staff as a partner in problem-solving. For example, equipment problems were addressed through technical trouble-shooting, replacement equipment and upgrades. In one case challenges in reaching disadvantaged project participants were addressed through attracting an additional project partner to provide needed computers for low-income households. Some barriers were not fully addressed due to their

complexity, including technical and/or institutional issues beyond the direct influence of the MHCRC and grant project implementers.

The barriers most frequently cited by grantees were internal organizational issues including leadership changes, restructuring, the failure to transition project knowledge internally with staff turnover, a lack of advance planning regarding integrating new equipment with existing operations, and inadequate in-house technical skills. Although some internal issues are beyond the control of the MHCRC, many could be positively influenced through refinements to grant making processes (e.g. streamlining the application and reporting requirements to be less time intensive) and partnerships with other funders (e.g. to provide support for project planning and evaluation). As has been noted previously, projects would benefit from better support for initial project planning and more access to technical expertise in the beginning stages.

Predictors of Successful Projects

Past experience is a powerful source of learning for future success. Most grantees interviewed said they would make changes if they had the opportunity to re-do their projects. These grantees emphasized the following major lessons learned: Be cautious with new (unproven) technology; take time to assess needs and involve stakeholders in project planning; build internal support; conduct research and provide for training and integration; and start small and build incrementally.

A useful framework for considering predictors of successful future grant projects is the list of six success factors in technology funding culled from the evaluators' review of technology grant making literature in *Appendix B*. Many of these success factors are already embedded in the MHCRC's grant making criteria and were evident in past projects based on interviews with grantees and the documentation review. In addition, the major lessons learned by MHCRC grantees are strongly correlated with success factors from the literature with one notable exception—the importance of evaluation activities.

Table 13 compares success factors found in the research about technology-related grant making with the lessons learned by MHCRC grantees. Following the table is a discussion relating six predictors of success in technology projects to the experiences of MHCRC grantees.

Table 13
Correlation of Major Lessons Learned by MHCRC Grantees
To Success Factors in Technology Grant Making

Success Factors from a Review of Technology Grant Making Literature	Major Lessons Learned as Reported by MHCRC Grantees
• Determined and committed leadership.	• Build internal support.
• A strong, involved consortium of mission-driven stakehodlers.	• Take time to assess needs and involve stakeholders in project planning.
• An infrastructure that includes people, knowledge and skill attainment, as well as integrated technology networks.	• Conduct research and provide for training and integration.
• Adequate technology planning within an integrated, organizational planning process.	• Conduct research and provide for training and integration. • Be cautious with new (unproven) technology.
• An incremental approach that maintains flexibility for change.	• Start small and build incrementally.
• Evaluation and assessment strategies that inform implementation and program improvement.	

Success Factor 1: Determined and committed leadership.

Although research demonstrating the importance of having support "at the top" for technology projects was based on the technology experiences of nonprofit organiziaotns, the principle also applies to technology initiatives in other sectors. The MHCRC grant program's requirement of matching resources from grantee organizations is one measure of committed leadership, and the strong support of leaders as project champions was specifically highlighted as a supporting factor by grantees. Conversely, grantees whose institutions underwent repeated changes in top leadership (e.g. a college president, school principals) experienced this as a barrier to be overcome.

Success Factor 2: A strong, involved consortium of mission-driven stakeholders.

The involvement and/or support of stakeholders are strongly encouraged within the MHCRC grant making application—an approach that is supported by research on technology grant making. Grantees emphasized the importance of working in partnership with others to achieve maximum community impact and efficiencies. In recounting lessons learned, numerous grantees reported that they would do even more in the future to involve stakeholders and work more closely with partners.

Success Factor 3: An infrastructure that includes people, knowledge and skill attainment, as well as integrated technology networks.

Consistent with many studies of technology projects, grantees emphasized the need for adequate staffing, training and technical support—as well as technology. Although the MHCRC grant program focuses on capital rather than operational expenses, the match requirement encourages grantee organizations to provide for staffing resources and other operational expenses, such as training and technical support, that are necessary for project success. Based on grantee experiences, however, it is clear that additional technical assistance resources would be useful. Peer-to-peer learning opportunities (in addition to the annual Community Media Roundtable) were also suggested by grantees in order to exchange promising practices, identify common needs and seed additional partnerships.

Success Factor 4: Adequate technology planning within an integrated, organizational planning process.

Research has shown that many organizations—particularly nonprofits—do not plan strategically for the integration for technology, and that small organizations (less than 20 employees) are the least likely to plan. Grantees recognized the importance of integrating technology within overall planning and operations, although this did not always occur. For larger grantee organizations, a lack of cross-departmental cooperation (silos) may have inhibited an integrated approach to planning in some cases. For nonprofit organizations and some educators, the lack of adequate technical support and staff capacity are potential barriers to the integration of technology planning. Without attending to integration, short-term project outcomes are often possible, but long-term sustainability is difficult.

Success Factor 5: An incremental approach that maintains flexibility for change.

Research on government technology projects demonstrates the effectiveness of building up projects from a small scale or a pilot project. This approach has been modeled well by some MHCRC grant-funded projects: A youth video project started small, had some initial success, learned along the way, and continues to attract additional community support and partners far beyond the original grant term. In another instance, a distance education project was piloted on a small scale before being expanded to reach every elementary school in Multnomah County. In both examples, important lessons were learned that enabled the projects to successfully expand.

Success Factor 6: Evaluation and assessment strategies that inform implementation and program improvement.

The potential benefits of evaluation to grantees and funders are well documented in research—including the potential for program improvement, sharing lessons learned, and making the most of limited resources The MHCRC grant program emphasizes project evaluation and requires grantees to have an evaluation plan with measurable project results. However, grantee follow-through on implementing evaluation plans, and the effectiveness of evaluation activities, has been mixed. Challenges in program evaluation are often closely related to inadequate capacity for organizational and project planning.

Grantees, particularly smaller organizations, would no doubt benefit from technical assistance in developing and implementing evaluation activities.

MHCRC's Grant Making Processes

Pre-Application and Application Process

Although most grantees interviewed reported that the pre-application and application process was clear, three found the processes "daunting" or "overwhelming" and two others reported being confused by the application's funding criteria and budget section. As one grantee commented, "It's a steep learning curve for a first-time applicant." Grantees consistently reported that conversations with MHCRC staff were the most helpful aspect of the pre-application and application process, and that staff were highly knowledgeable and supportive. All but one grantee interviewed was aware of the informational meeting conducted for prospective grantees and almost all reported that they had attended an informational meeting.

The level of detail and complexity within the application has proved challenging for some grantees and, in particular, is likely to pose difficulties for small organizations with limited capacity. Focus group participants, including educators and representatives of nonprofits, emphasized that teachers and small groups are over-stretched with inadequate staffing, training and technical support.

Grantees offered specific suggestions aimed at simplifying the application process, including simplifying categories, creating customized packages for constituencies with particular needs (e.g. a customized package for teachers that includes equipment, training and technical support), and creating a two-tiered granting system with reduced application and reporting requirements for small projects.

Budgeting and Reporting

A comparison of proposed project budgets and actual expenditures shows little variation. Eighty-nine percent (89%) of the grantees met their proposed budgets and in many cases, the grantees reported more matching funds than were proposed. However, according to grantees interviewed, in many instances additional matching requirements—particularly staff time—were provided but were not reported.

Most (74%) of the nineteen completed projects analyzed and all of the special funding round projects filed clear, accurate and timely financial reports with their required narrative reports. In reports that were less than adequate or revealed discrepancies, the grantees' need for technical assistance for the reporting process was clear. However, these reports were seldom completed on time. Fewer than half (48%) of the nineteen projects evaluated from the annual competitive grant round filed their final report on time and thirty-seven percent (37%) filed interim reports on time. By all indications, the current reporting process is difficult for both grantees and MHCRC staff. It would be useful to consider a streamlined, simplified and standardized reporting process, especially

for grantees with small awards. Reporting of this kind is also a value-added data collection tool for MHCRC staff.

Evaluation Plans

Evaluation plans were in place for every grantee to measure the degree to which project outcomes were successful. Outcomes related to the projects' technical goals and objectives were accurately and extensively documented in the reporting process. These were often expressed as the numbers of clients served, equipment purchased, sites connected, etc. However, the degree of successful implementation for qualitative outcomes was unclear in many cases. Examples of qualitative outcomes include student learning, participant satisfaction, increased collaboration, etc. The lack of clarity in evaluation data is exacerbated by the fact that in a review of final reports, over half of the nineteen completed projects either did not complete (26%) or partially completed (26%) their proposed evaluation plans. Those who did complete the plans (47%) referred to their evaluation reports, but did not always include the results.

In interviews, several grantees remarked on the usefulness of evaluation activities for program improvement. They expressed a desire to do more evaluation and to share the lessons they have learned with other grantees. Those who worked with external evaluators remarked that they would have gained from bringing evaluation into the project earlier. Some grantees reported success with evaluation for team-building, meeting project milestones, and making program changes. Evaluation results of this kind are especially useful to new grantees and to MHCRC staff.

However, as reflected in the research literature about technology-related grant making, most of the grantees struggled with evaluation. They said that their original plans were overly ambitious, or that they did not have the time or resources to implement them. Without formal records and well-organized evaluation results from each project, it is a difficult task for MHCRC staff to collect, organize and disseminate evidence of successful outcomes and lessons learned across programs for decision-making purposes. Technical assistance for measurement of simple, clear and reliable data collection would be a benefit to both staff and grantees.

Extent to Which the Grant Program is Supportive to Small Organizations and Special Needs Populations

Participation in the MHCRC grant program is challenging for groups with limited capacity such as small nonprofits and teachers. For these constituencies, tailored technical assistance and simplified granting requirements would encourage more participation and greater effectiveness. Furthermore, traditionally underserved communities were the targeted beneficiaries for fifteen percent (15%) of grant projects, according to grantees' self-reported documentation, suggesting the need for additional strategies to assure that Multnomah County's increasingly diverse communities are served more directly by the grant program. It may also be that grantees do more service to these communities, but count them within the "general public" category in their

reporting. More assistance to grantees with the reporting process may also help to capture a more accurate picture of communities served.

Because the grant program provides capital resources for cable system technology, it has attracted organizations that have some awareness and experience with communications technology. To involve groups below a certain "technology threshold" would require new strategies and tactics. For example, as focus group participants noted, some new immigrants are challenged due language and cultural barriers combined with a lack of communications technology experience. To involve such groups in the grant program would require a concerted effort that emphasizes personal contact and one-on-one relationship building with individuals who are able to serve as cultural "bridge people."

Emerging Issues and Areas of Need

Collectively, the Community Access Capital Grant Program grantees represent an extensive body of knowledge based on their lived experiences with: grant projects, organizational life in diverse institutions, and a vast array of community networks (social and technological). To assist the MHCRC in considering future directions for the grant program, grantees were asked how communications technology could help address needs in the communities they serve, and what advice they would give to a technology grant maker about emerging areas of need. Looking to the grant program's future, grantees emphasized several important themes:

- Grantees see the need for *leading edge applications* that combine print, audio and moving image communications. This suggests a desire to continue the grant program's commitment to innovation. At the same time, grantees have learned lessons about the dangers of relying on new technology without adequate research, planning, and testing.

- In emphasizing *multilingual communications*, grantees are concerned with bridging the digital divide to assure that the area's increasing diversity, as represented by many cultural and language groups are able to share in the benefits of education and public life through greater use of communications technology.

- The strong interest on the part of grantees in promoting a high-capacity *regional communications infrastructure* in the tri-county area reflects the current reality that most government agencies, education institutions and nonprofit groups provide information and/or services beyond the cable system service area.

- Based on their experiences with public, nonprofit and educational institutions, grantees understand the importance of utilizing communications networks to support the *professional development for public servants*—for example through in-service training for teachers, government workers, healthcare and social service providers.

- Due to the rapid pace of technological change and continual needs to replace equipment and upgrade software, grantees also emphasized the importance of

providing for *technology upgrades and maintenance* so that the benefits of grant funded projects can continue to be realized over time.

An even broader perspective on the future of the grant program was offered by one grantee:

> Keep the core values that have driven the grant
> program: benefiting people not technology for
> technology's sake, democratic participation and voice, a
> functional social structure, better communities, civility
> and understanding of cultural differences.

VIII: Recommendations

The MHCRC's Community Access Capital Grant Program is a significant community resource that has contributed to the achievement of important public benefits in the past four years. In making recommendations for the future, this evaluation—which included a review of grant documents, interviews with grantees, and focus groups with current and potential grantees—finds much success on which to build. Specific recommendations offered to strengthen the impact and efficiency of the grant program are: Streamline reporting requirements and reporting process; Implement a visibility plan for ethically-diverse and special needs populations; Foster a learning community with grantees; Create a philanthropic network; Facilitate technical assistance; Provide more customization of the grant program; and Provide leadership to strengthen regional interconnectivity

Streamline Reporting Requirements and Reporting Process. Reporting requirements are currently burdensome to many grantees and are not systematic enough to assist staff with troubleshooting and decision-making. The current reporting process results in both too much and not enough data, making it difficult to quickly reconcile the evidence needed to generalize across projects. Some of the information collected is anecdotal and difficult to share with stakeholders. Other information is much more detailed than it needs to be, creating a data glut that is difficult for a small staff to analyze and organize efficiently.

Reporting can be standardized and simplified to assist informed, timely, evidence-based decision making. Streamlined reporting requirements would assist both MHCRC staff members and grantees by 1) simplifying the reporting process for grantees, thus contributing to their timely accountability and 2) standardizing the reporting process, thus facilitating uniform, cross-project data collection. In addition, logs of anecdotal evidence, such as letters, verbal and emailed conversations, contribute to a more complete overview of grantee success and can be formally incorporated into the data collection design without sacrificing reporting efficiency. MHCRC staff already document and log anecdotal program information about financial and programmatic compliance. However, this evidence is not always systematically included with other written documentation. As a result, although staff awareness of grantee progress is highly detailed and accurate, the informal nature of this documentation makes it difficult to share with stakeholders.

The first step is to prioritize indicators of success with key stakeholders. These indicators can also be used for internal evaluation of MHCRC grant making activities. The document review indicators located in *Appendix C* provide a place to start. These indicators can be analyzed, refined and prioritized by stakeholders for use in designing a new reporting system. Once the information architecture is designed, an online reporting process could be developed. An online system would provide grantees with accessible, organized and simplified reporting tools and processes. The online system could also be used by staff to monitor project activity and to sort and aggregate the collected data across programs.

Implement a Visibility Plan for Ethically-Diverse and Special Needs Populations.
Fifteen percent (15%) of grantees identify traditionally underserved communities, such as
ethnically diverse communities and citizens with special needs as their target audiences.
For example, one project was customized for hearing impaired individuals. In addition,
interviews reflected the need for strategic support for non-English speakers and culturally
diverse communities who hope to bridge the digital divide

A visibility plan to increase awareness about the MHCRC Community Access Grant
Program for ethnically diverse communities and special needs populations would enable
more participation from and for a broader range of grantees. The plan could identify the
degree of need for specific communities, create linguistically and culturally appropriate
materials, strategically disseminate information about MHCRC funding, and put
appropriate supports in place to encourage and sustain grantees that reflect the
demographics in Multnomah County.

Undoubtedly, projects provide public benefit for ethnically diverse and other traditionally
underserved community members as part of their service to the general public. In
addition to higher visibility for the MHCRC Community Access Capital Grant Program,
improved reporting systems may better capture more specific data about audience and
client demographics for these projects in the future.

Foster a Learning Community with Grantees. Increased opportunities for shared
learning with Community Access Capital Grant Program grantees would provide
important peer-to-peer support and contribute to program improvement. In addition, a
learning community moves grantees from a limited "grant compliance" mindset to one of
shared vision, creativity, innovation and mutual support.

There are numerous ways that MHCRC staff can facilitate and initiate convening
activities that bring grantees together. Online bulletins related to funding opportunities,
workshops, research, and technical assistance information are a start. Posting of
information, such as grantee profiles is another. Convening meetings with affinity groups
within the overall grant program, such as educators, digital video equipment users, small
or large organizations, small or large awards, and groups with varying capacity express
slightly different needs, would also contribute to project learning and advancement.

Create a Philanthropic Network. A consortium of regional philanthropic organizations
interested in technology funding could bring the necessary flexibility and the potential to
leverage technology funding for planning, technical assistance, training, evaluation and
convening activities necessary for widespread, integrated and effective deployment.
These types of philanthropic relationships and collaborations have the potential to
promote synergistic, systemic projects that overcome the funding limitations imposed by
individual grant makers. They also provide a broader dissemination network for lessons
learned in technology-related grant making.

A committee established by the MHCRC could be charged to research and establish relationships with a diverse array of local, regional and national philanthropic institutions interested in technology-related grant making in the Multnomah County area with a goal of establishing both informal and formal philanthropic networks.

Facilitate Technical Assistance. Clearly, additional funding for supporting factors outside the scope of the Community Access Capital Grant Program would contribute to program success. One option is to specify a percentage of non-capital matching funds for specific supporting factors (e.g. project evaluation), as condition of MHCRC funding. However, if matching funds are to be strategically directed, it is important to understand grantees' need for technical assistance. Grantees express a need for technical assistance and efficiency in the application process, planning, evaluation, training and reporting.

Although the topics are consistent, the degree and kind of technical assistance vary. Affinity groups within the overall grant program, express slightly different needs by institution, technologies used, size or communities served. Technical assistance can be identified or efficiently designed for these affinity groups to support the core funding initiative of the MHCRC Community Access Capital Grant program and at the same time, to address the ancillary issues necessary for project success.

All grantees would welcome evaluation assistance that would help them to improve and advance their projects, such as support with: identifying and prioritizing measurable outcomes; designing and conducing realistic, cost-effective evaluation plans; locating evaluation expertise, and reporting evaluation results. In addition, standardized information-gathering tools across all projects would assist MCHRC staff in aggregating the information about best practices and lessons learned.

To strengthen grantee project evaluation practices, MHCRC must take the lead by recommending cost-effective and efficient evaluation strategies. In order to simplify and clarify the evaluation process so that it is useful to both grantees and the MHCRC, the purposes of evaluation must be clear. It would be useful if the Commission could internally prioritize what evidence would prove most valuable for use in both program improvement and MHCRC grant making decisions and recommend appropriate data collection tools for use by grantees.

Provide More Customization of the Grant Program. Several grantees urged consideration of a tiered and/or customized granting system to accommodate small projects (e.g. under $20,000), defray the costs of technology upgrades for projects funded in previous grant rounds, or serve specialized constituencies (e.g. packages for teachers that include equipment, training and technical support). The special funding rounds already piloted by the grant program are providing the MHCRC with some experience in customizing to meet particular needs outside the regular annual competitive grant rounds. Additional customization would require development time and ongoing MHCRC staff support. Benefits could include: addressing targeted and/or time-specific (one time only) community needs, a shortened and simplified grant cycle for awards to small and

straight-forward projects, and extending the life of previously funded grant projects beyond their initial term through add-on awards for technology upgrades.

Provide Leadership to Strengthen Regional Interconnectivity. Several grantees involved in grant-funded institutional infrastructure projects emphasized the need for a high-capacity, tri-county communications infrastructure that is not bounded by the cable system. Just as the service areas for institutions often span many counties, so do many important public issues and services. An emerging area for exploration is the potential for the grant program to seed activities that would bring public technologists, infrastructure providers and agencies involved in public service delivery together to work on small projects that benefit the region. In doing so they would also be creating a basis for working jointly to address larger, longer-term, boundary-spanning community needs.