

## Agency Strategic Plan

## Advanced Learning Research (885)

3/17/2014 11:30 am

Biennium: 2008-10 ▼

## Mission and Vision

**Mission Statement**

The Institute for Advanced Learning and Research (IALR) develops and attracts technology and talent critical to Southside Virginia's economic prosperity.

**Vision Statement**

The Institute for Advanced Learning and Research (IALR) is to be a catalyst for regional transformation to an innovative, high-tech economy that creates new opportunities for the citizens and businesses of Southside Virginia.

## Executive Progress Report

**Service Performance and Productivity**

- *Summary of current service performance*

The IALR measures its service performance by the fulfillment of its strategic goals and objectives. The IALR made great progress toward these goals in 2007. Major milestones included the first full year of operation for research labs and the construction of new facilities, as well as many programmatic offerings ranging from an array of higher education, courses to science, technology, engineering, and math (STEM) outreach programs. Additionally, the IALR and Southside welcomed seven new research faculty and scientists to the staff and twelve Virginia Tech graduate students to conduct research and pursue their coursework bringing the total of IALR-based research faculty and students to thirty-eight. In addition, five students graduated/completed coursework. The talented IALR faculty and staff are helping to build an intellectual hub in Southside Virginia to serve as a magnet for economic renewal.

- *Summary of current productivity*

The IALR is proud of the progress made over the past fiscal year. Accomplishments and successes include:

Selected awards and accolades include the Governor's Award for Innovation in Higher Education Technology and the National Association of State Universities and Land-Grant Colleges C. Peter Magrath/W.K. Kellogg Foundation Engagement Award for the South Region (Virginia Tech/IALR is one of five finalists for the national award).

**Strategic Research and Commercialization**

- Senior Director for Research and Innovation was hired to lead IALR research and commercialization activities.
- The Research Addition, the second IALR building located in the Cyber Park, was constructed and upfitted.
- The U.S. Economic Development Association funded project, "Leveraging Research & Development for Economic Development – A Commercialization System for Southside Virginia," was initiated and the first of three positions directed at supporting small and medium sized businesses and start-ups by providing assistance in market research, commercialization through technology transfer, and access to financial capital, was filled.
- The Advanced and Applied Polymer Processing Institute (AAPPI) received funding under the Virginia Tech Materials Center of Excellence for the U.S. Army Research Laboratory Weapons and Materials Research Directorate, from the Department of Defense for the 2007 Defense University Research Instrumentation Program, and in partnership with Phenotype Screening Corporation, from the U.S. Department of Agriculture for a Small Business Innovation Research Phase II project involving the initiation of polyurethane foam development for x-ray analysis of plant root systems.
- AAPPI also received the best paper award for the Joining Special Interest Group at the Society of Plastic's Engineers Annual Technical Conference 2007.
- The Institute for Sustainable and Renewable Resources (ISRR) recruited and hired additional IALR-located faculty and research specialist technicians, rounding out the ISRR's expertise in three target areas: Novel Horticulture and Forestry crops, Novel products from plants, and molecular breeding for biofuels and bioenergy.
- ISRR contracted with a large multi-national biotechnology company for plant transformation technology development.
- Virginia Tech Mechanical Engineering graduate courses were taught by resident IALR faculty (VIPER) in distance learning classrooms at the IALR during the 2006-2007 academic year to students in Danville and Blacksburg.
- The Virginia Institute for Performance Engineering and Research (VIPER) building at Virginia International Raceway (VIR) was completed and the 8-post rig was installed and is now operational.
- Goodyear announced collaborations with IALR that would potentially include the development a tire-testing facility in Southside.
- The Joint Unmanned Systems Test, Experimentation and Research Site (JOSTER) building at VIR was completed.
- The Mechanical Engineering effort at IALR received funding for 3-D Terrain Topology work from the Army Research Office - Tank-Automotive & Armaments Command (TACOM).

#### Outreach and Advanced Learning

- IALR partnered with the Southern Virginia Higher Education Center and the New College Institute to form the Southside Higher Education Coalition. This partnership gained funding to provide distributed advanced learning programs across the service region.
- Received funding from the Tobacco Commission to place twenty-six interns in local businesses over the summer.
- Through the Tobacco Commission, provided 8 scholarships to local students.
- 46 students in the service region were enrolled in IALR supported credit-based advanced learning courses in FY 2006-07. 20 students enrolled in IALR supported academic programs earned a certificate or degree in FY 2006-07.
- An extensive set of K-12 Faculty Development programs, and K-12 Student and Adult Learning Opportunities were administered, which focused primarily on science, technology, engineering, and math. These programs attracted 9,144 participants during FY 2006-07.
- Continued to partner with the Danville Science Center and local schools to host science and technology field trips. Middle and high school students visited the IALR and spent the day with IALR horticulture scientists and the IALR information technology director. Students learned about the exciting research initiatives underway in Southside, as well as career options available in science and technology.

#### Technology

- There were 1,644 participants in IALR-facilitated workshops, seminars, conferences, and programs focused on advanced networking and information technology in FY 2006-07.
- IALR was selected as 1 of only 90 national and 150 international test sites for the new Microsoft Vista operating system.

#### Institute Conference Center

- The Institute Conference Center serviced over 12,000 outside attendees (not including IALR programs) and contributed to at least \$20,000 in gross local hotel revenue.
- Maintained over a 99% customer satisfaction rate.

### Initiatives, Rankings and Customer Trends

#### • *Summary of Major Initiatives and Related Progress*

Strategic Research and Commercialization: Develop an intellectual hub in Southside Virginia by creating robust strategic research centers and activities that create regional economic impacts. Translate IALR assets into programs and activities that support the creation of an innovation economy through commercialization & technology transfer, enterprise management, and business development. The four areas of the research have already started to secure private research funding and activity in this area is ongoing. This year IALR also focused on the start-up of commercialization services.

Advanced Learning: Position the region to develop a workforce for the future by: promoting the development of seamless pathways between K-12, associate, bachelor, and graduate programs associated with strategic economic sectors; creating an academic and social support system for research center-affiliated graduate students; and by enhancing citizen access to advanced learning opportunities. This year the IALR supported on-site graduate students, guided internship and scholarship opportunities, and partnered to establish the Southside Higher Education Coalition.

Outreach: Provide a nucleus of leadership, based in social science scholarship, for partnering across organizations to: provide targeted, accessible, affordable programs that enable Southside citizens to build their competencies in science, technology, and engineering, and math; and to promote the value of postsecondary education. This year's outreach programs included offerings for K-12 students, teachers, adult learners, entrepreneurs, and nonprofit organizations.

Community Engagement: Develop programs that educate the citizens of the IALR service region about competing in a global economy and the unique role of the IALR as a catalyst in helping to position Southside effectively; partner with community organizations to engage them in embracing, supporting, and owning the IALR mission and facility. This area has hosted several programs targeting everyone from children to senior citizens.

Advanced Networking & Technology: Develop and maintain a leading-edge information technology operation which relies on best practices to support its constituents, evolve the infrastructure, develop IT staff capabilities, and be a high-tech symbol for the region. Provide regional leadership in implementing, showcasing, and educating the community about advanced networking and leading-edge information technologies. In addition to its information technology support responsibility, this area also hosted interns and partnered to provide various programs focused on advanced networking and technology.

Institute Conference Center: Promote Southside Virginia as a destination location by providing quality program and event hosting and logistics, including external clients and internal support for IALR programs in Research, Outreach, and Academics. In FY 2006-2007, the Institute Conference Center serviced over 12,000 outside attendees (not

including IALR programs) and contributed to at least \$20,000 in gross local hotel revenue.

- *Summary of Virginia's Ranking*

As of 2002, the State of Virginia ranks 17th in NSF recorded expenditures for research and development from federal, state, industry and institutional funds. The efforts of the Institute for Advanced Learning and Research will enhance the research and development effort in Virginia.

- *Summary of Customer Trends and Coverage*

Southside Virginia needs to rebuild its economy and develop its intellectual capital base, particularly in science, technology, engineering, and math.

**Future Direction, Expectations, and Priorities**

- *Summary of Future Direction and Expectations*

Priorities include fully staffing and equipping IALR research centers, developing commercialization support systems, creating educational pathways from K-12 through graduate degree programs in targeted disciplines, offering a strong array of STEM outreach opportunities to citizens of the region, and attracting high-tech businesses to Southside. As we move forward, the needs of the region will continue to influence our creation of new programs and initiatives.

- *Summary of Potential Impediments to Achievement*

Potential impediments affecting our strategic plan include:

- a) Funding levels for academic and outreach programs
- b) Ability to attract quality faculty and staff
- c) Broad economic trends

**Service Area List**

Service Number	Title
885 534 21	Regional Research, Technology, Education, and Commercialization Services

**Agency Background Information**

**Statutory Authority**

The Institute for Advanced Learning and Research was created by Title 23 - Chapter 16.4 of the Virginia Code. This authority provides for the establishment for the following objectives for the Institute.

1. Seek to diversify the Dan River Region's economy by engaging the resources of Virginia Polytechnic Institute and State University in partnership with Danville Community College and Averett University and public and private bodies and organizations of the region and state.
2. Serve as a catalyst for economic and community transformation by leveraging and brokering resources that support economic diversity for the region, particularly within the network economy.
3. Provide a site for the development of the technology and trained workforce necessary for new economic enterprises to flourish in Southside Virginia through the teaching, research, outreach, and technology available from its partner institutions.
4. Expand access to higher education in Southside Virginia by providing for adult and continuing education, workforce training and development, and degree-granting programs, including undergraduate, graduate and professional programs, through partnerships with the Commonwealth's private and public institutions of higher education, the City of Danville, County of Pittsylvania, the public schools, and the public and private sectors in the region.
5. Serve as a resource and hub for network-related initiatives in education, at all levels, and in economic development activities.
6. Assist in regional economic and community development efforts by housing and encouraging research and product-related activities and encouraging high technology economic development in the region.
7. Encourage and coordinate, as appropriate, the development and delivery of programs offered by those educational institutions serving the region.
8. Serve as a resource and referral center by maintaining and disseminating information on existing educational programs, research, and university outreach resources.

**Customers**

Customer Group	Customers served annually	Potential customers annually
Adult Education Services	4,111	243,000
Employers	75	13,000

K-12 Students	1,450	47,859
K-18 Educators	326	3,500
Nonprofit organizations	34	253
Resident Graduate Students	17	60
Small businesses (less than 100 employees)	75	10,500

#### *Anticipated Changes To Agency Customer Base*

As our plans mature and our facilities and personnel continue to come online, the IALR expects to be able to serve an increasing number of diverse constituents throughout our service region and beyond.

#### **Partners**

<b>Partner</b>	<b>Description</b>
Averett University	Founding partner; academic program partner.
City of Danville / Pittsylvania County	Founding partner; funded facility construction for IALR use.
Dan River Business Development Center	AAPPI has experimentation labs located at the Dan River Business Development Center.
Danville Church-Based Tutorial Program	Outreach program partner.
Danville Community College, Patrick Henry Community College, Southside Community College	Danville Community College is a founding partner, and Patrick Henry Community College, Southside Community College and Danville Community College are academic program partners.
Danville/Pittsylvania Chamber of Commerce	Outreach program partner.
Future of the Piedmont Foundation	Founding partner.
K-18 Schools	(Danville City, Pittsylvania County, Franklin County, Halifax County, Martinsville City, Mecklenburg County, and Patrick County) Partnerships formed to ensure that strategic academic pathways are aligned with K-18 curriculum.
Longwood University	Academic program partner.
New College Institute	Southside Higher Education Coalition partner.
Old Dominion University	Academic program partner; Research program partner.
Southern Piedmont Technology Council	Technology program partner.
Southern Virginia Higher Education Center	Southside Higher Education Coalition partner.
Southside Community Advocates for Learning Excellence United for Progress (SCALE-UP)	Outreach program partner.
United Way	Outreach program partner.
University of Virginia	Academic program partner.
Virginia Commonwealth University	Academic program partner.
Virginia International Raceway (VIR)	VIPER and JOUSTER each have experimentation labs located on the grounds of VIR.
Virginia Tech	Founding partner; Administrative partner; Research partner; Academic program partner; Outreach program partner.

#### **Products and Services**

- *Description of the Agency's Products and/or Services:*

Strategic Research and Innovation: Develop an intellectual hub in Southside Virginia by creating robust strategic research centers and commercial activities that create regional economic impacts and support the creation of an innovation economy through commercialization & technology transfer, enterprise management, and business development. To date, four areas of research have been created: The Institute for Sustainable and Renewable Resources (ISRR), The Advanced and Applied Polymers Processing Institute (AAPPI), The Virginia Institute for Performance Engineering and Research (VIPER), and The Joint Unmanned Systems Test, Experimentation and Research Site (JOUSTER).

Advanced Learning: Position the region to develop a workforce for the future by promoting the development of seamless pathways between K-12, associate, bachelor, and graduate programs associated with strategic economic sectors; creating an academic and social support system for research center-affiliated graduate students; and by enhancing citizen access to advanced learning opportunities.

Outreach: Provide a nucleus of leadership, based in social science scholarship, for partnering across organizations to: provide targeted, accessible, and affordable programs that enable Southside citizens to build their competencies in science, technology, engineering, and math; and to promote the value of postsecondary education.

New Economy Programs: Organize conferences and seminars that bring together scholars, industry experts, and like-minded individuals around topics that relate to the development of an innovation economy in sectors associated with IALR strategic science and technology initiatives, as well as around economic and social development themes.

Community Engagement: Develop programs that educate the citizens of the IALR service region about competing in a global economy and the unique role of the IALR as a catalyst in helping to position Southside effectively; partner with community organizations to engage them in embracing, supporting, and owning the IALR mission and facility.

Advanced Networking & Technology: Develop and maintain a leading-edge information technology operation which relies on best practices to support its constituents, evolve the infrastructure, develop IT staff capabilities, and be a high tech symbol for the region. Provide regional leadership in implementing, showcasing, and educating the community about advanced networking and leading edge information technologies.

Institute Conference Center: Promote Southside Virginia as a destination location by providing quality program and event hosting and logistics, including external clients and internal support for IALR programs in Research, Outreach, and Academics.

- *Factors Impacting Agency Products and/or Services:*

The primary factors which may impact our products and services are funding levels for academic and outreach programs, the ability to attract qualified faculty and staff, and broad economic trends.

- *Anticipated Changes in Products or Services:*

As we move forward, the needs of the region will continue to influence our creation of new programs and initiatives.

## Finance

- *Financial Overview:*

For the fiscal year that concluded June 30, 2008 the Institute for Advanced Learning and Research was funded by a combination of federal funds, state of VA appropriation (\$5.9 million), and smaller sources such as indirect cost recovery and rental income.

In the new fiscal year beginning July 1, 2008, our state of VA appropriation has been increased to \$6.2 million and increased revenues are forecasted for both federal grants and indirect cost recovery. There is no private funding included in the budget for FY2009.

- *Financial Breakdown:*

	FY 2009		FY 2010	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	\$6,235,585	\$0	\$6,560,598	\$0
Change To Base	\$0	\$0	\$0	\$0
Agency Total	\$6,235,585	\$0	\$6,560,598	\$0

*This financial summary is computed from information entered in the service area plans.*

**Human Resources**

- *Overview*  
N/A - The State does not appropriate positions at IALR.
- *Human Resource Levels*

Effective Date	6/30/2007	
Total Authorized Position level	0	
Vacant Positions	0	
<b>Current Employment Level</b>	<b>0.0</b>	
Non-Classified (Filled)	0	breakout of Current Employment Level
Full-Time Classified (Filled)	0	
Part-Time Classified (Filled)	0	
Faculty (Filled)	0	
Wage	0	
Contract Employees	0	
<b>Total Human Resource Level</b>	<b>0.0</b>	= Current Employment Level + Wage and Contract Employees

- *Factors Impacting HR*  
N/A - The State does not appropriate positions at IALR.
- *Anticipated HR Changes*  
N/A - The State does not appropriate positions at IALR.

**Information Technology**

- *Current Operational IT Investments:*

Current State/Issues

To help bring about the economic change of the Southside Virginia region, the Institute for Advanced Learning and Research is focused on the importance of technology and the role it plays in the 21st Century economy.

The IALR is committed to providing regional leadership to implement, showcase, and educate the community about advanced networking and leading edge information technologies. To this end, IALR is focused on:

- Researching and installing of facilitating the installation of leading edge technologies, both within the IALR and its affiliated facilities as well as in partnership with regional entities engaged in implementing advanced networking infrastructures
- Staying abreast of cutting-edge applications of information technology, and positioning the IALR in a leadership role regionally in the adoption and utilization of these applications
- Championing the adoption of business, government, healthcare, education, and entertainment applications that will drive broadband demand in the region.
- Advocating first mile broadband connectivity for businesses and organizations in the region
- Educating the Southside region about leading edge technologies, advanced networking, and cutting edge applications of information technology that position the organizations in this region to be players in the innovation, networked economy
- Promoting Southside Virginia as a place that is progressive, that understands and is adopting durable information technology platforms, and that effectively uses information technology to create competitive advantage

Voice and Data Networks

Voice and data are converged over a local area network to provide state-of-the-art communication capability. Also known as IP Telephony, this architecture enables applications that require voice and data elements to be combined. In the past, separate networks were required to handle traditional voice, data and video traffic, which limited their usefulness. Each required separate transport requirements making them costly to install, maintain and reconfigure, in which integration was basically impossible. By blending voice, video and data and employing a common transport for each, it effectively merges three networks into one. VoIP (Voice over IP) networks offer the benefits of easier manageability, lower costs for services and support. The voice communication services are scalable enough to allow seamless data, voice and video connections to remote sites such as the as the research labs located at the Virginia International Raceway as well as the additional research buildings located in the IALR campus.

A Unified Messaging system permits the storage of voice mail and email on a common server and access or retrieval of any message from any phone or internet-connected computer. For example, traveling professionals can access, respond to and manage all their messages from personal computers, regular telephones, cell phones or the Internet – regardless of the device used to create the initial message.

A video conferencing bridge allows IALR to connect up to 40 sites together for a video conference. The bridge allows for a wide variety of different types of video conferencing codecs to connect together for one simultaneous video conference.

#### Cabling

The CAT 6 cabling system, with its available bandwidth of 200 MHz, offers twice as many lanes of traffic as a Category 5e cabling system with an available bandwidth of 100 MHz. This increase in bandwidth allows an increase in the data rate. The new CAT 6 standard includes specific requirements for interoperability between different vendors' products as well as full backward compatibility with all existing Category 5 and 5e cabling. Fiber Risers run between the first and second floors.

#### Wireless

In areas where cable network connection is not feasible, a wireless 802.11b/g network offers up to 54Mbps of Internet connectivity to IALR staff, researchers, and the general public. This network is also leveraged for wireless communication using 802.11.b-based wireless handsets that allow users to roam freely around the facility.

#### Wide Area Network

The IALR has several external connections to the Internet. One such connection is a 6 strand long haul single mode fiber strand that runs from the Institute to the MSAP located in Danville, VA. This provides access to the Mid-Atlantic Broadband (MBC) network. There is also a DS-3 Connection from the Institute to Network Virginia. These connections allow for collaboration with the surrounding region in the form of the MBC and E-Dan fiber networks as well as with Virginia Tech in the form of the DS-3 to Network Virginia which is located at Virginia Tech. These connections allow for collaborative efforts with partners such as Virginia Tech and IALR's regional service area towards the goal of stimulating economic development in the region.

#### Atrium

The Atrium is a breathtaking reception and gathering area that features an eye-catching 13' x 13' video wall of nine 42 inch plasma screens. This video wall can be programmed to show one image or up to nine separate images. A custom kiosk with an interactive touch screen allows visitors to find meeting locations and other daily activity information.

#### Great Hall

The Great Hall is the largest space in the IALR facility, occupying over 8,000 square feet. This room features two large screens and projectors that conveniently retract into the ceiling when not in use. A touch panel automates the dividing of the room into six smaller units and coordinates the lighting, audio, microphones, and projection systems.

#### Executive Auditorium

This tiered auditorium features a cinema-quality 9' x 16' high definition screen and digital surround –sound audio that can be used for educational, business, or civic presentations. The Executive Auditorium accommodates 125 persons at built-in tables that permit both wired and wireless high speed Internet connectivity. Two cameras allow for presentations to be sent via video conference throughout the world.

#### Business Conference Rooms

The Business Conference Rooms at the IALR are specially designed for groups seeking to conduct their meetings and presentations in a high-tech environment. Three standard rooms are situated on the second floor overlooking the Atrium. The Executive Board Room, the largest conference room at IALR, can seat over 30 people around a large oval meeting table and overlooks the Atrium as well. In these rooms, presenters will find strategically placed plasma television screens so that all involved may clearly view any presentation or video conference in an atmosphere worthy of a Fortune 500 company.

#### The Emporium Classroom

Modeled after the original Math Emporium at Virginia Tech, this large room features clusters of computer workstations, or "pods," accommodating approximately 54 people in total. Students use self-directed courseware with tutors or faculty members present for extra help. One-on-one or small group tutoring can be accomplished by pulling students aside and using the Emporium's writable, erasable wall surface to illustrate complex concepts.

#### Distance Education Classrooms

**Faculty Development Classroom**

Equipped with dual screens and computer workstations throughout, this classroom can seat approximately 32 persons and is designed especially for educating teachers in K-12 and higher education about integrating technology into their teaching. This room also offers opportunities for teaching computer-based classes to larger numbers of students.

**Large Distance Learning Classrooms**

Interactive High Definition Videoconferencing capability allows a teacher and 32 students in this classroom to interact with students at multiple, geographically distant locations, both visually and orally. High definition teacher camera, High definition student camera, document camera, VCR, and DVD player allow the instructor to share different kinds of material with students when classes originate from this location.

**Small Distance Learning Classrooms**

These classrooms can accommodate approximately 10 students in a seminar-style arrangement and are perfect for small numbers of local students to participate in a class originating somewhere else via video conference. Interactive videoconferencing, complete with a small set-top camera, allows students to see, be seen, hear, and talk with the instructor and other students remotely.

**Other Equipment**

IALR also has many equipment options that can transform most standard rooms into high-tech video conferencing and distance learning environments. There is a SMART Cart that consist of a 50" Plasma and a SMART Board Overlay. This combination creates an interactive whiteboard and the instructor can touch the screen with a SMART board pen or finger and to diagram, write, and highlight items on the screen. It also has a built-in touch panel control center, computer inputs, DVD/VCR, and document camera. Two mobile video conference carts are used to provide video conferencing ability in virtually any room. They are equipped with Polycom units, two monitors, and camera. Two Polyvision Walk-and-Talk and Smart Sympodiums are used to provide interactive instruction during course lectures. These devices allow the instructor to use a stylus to create writings and vivid demonstrations which are captured on the projected computer screen. Three document cameras are also available for use in any room. They allow presenters to clearly display documents on the plasma or projection screens.

Another technology we utilize is Mediasite. Mediasite gives us the ability to record and stream "live" classes. This is a great resource for teachers and students. Teachers can use any video, graphic, or presentation source during their lecture. The Mediasite recorder encodes, indexes, and synchronizes the audio, video, and graphic inputs. Content is published to the Mediasite server where it's available for live or on-demand viewing over the internet or intranet. The content can also be published directly to CD/DVD and USB devices. Students can watch the presentation through any web browser at their convenience, either live or on-demand. One more feature Mediasite has is the ability to distribute "podcasts" to students.

- **Factors Impacting the Current IT:**

Several factors will impact the technology operation at the IALR. One factor is to be able to secure funding to maintain a cutting edge facility with base budget and a capital replacement fund. Also as the academic and research programs expand, there will need to be additional IT personnel to support the operations and programs in these areas.

- **Proposed IT Solutions:**

The research and academic programs are growing. Because of this growth, the Information Technology operations will need to grow as well. We are anticipated growth in personnel and IT infrastructure, servers and desktops as these programs mature.

- **Current IT Services:**

**Estimated Ongoing Operations and Maintenance Costs for Existing IT Investments**

	Cost - Year 1		Cost - Year 2	
	General Fund	Non-general Fund	General Fund	Non-general Fund
Projected Service Fees	\$0	\$0	\$0	\$0
Changes (+/-) to VITA Infrastructure	\$0	\$0	\$0	\$0
<b>Estimated VITA Infrastructure</b>	\$0	\$0	\$0	\$0
Specialized Infrastructure	\$0	\$0	\$0	\$0

Agency IT Staff	\$0	\$0	\$0	\$0
Non-agency IT Staff	\$0	\$0	\$0	\$0
Other Application Costs	\$0	\$0	\$0	\$0
<b>Agency IT Current Services</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

*Comments:*

[Nothing entered]

- *Proposed IT Investments*

Estimated Costs for Projects and New IT Investments

	Cost - Year 1		Cost - Year 2	
	General Fund	Non-general Fund	General Fund	Non-general Fund
Major IT Projects	\$0	\$0	\$0	\$0
Non-major IT Projects	\$0	\$0	\$0	\$0
Agency-level IT Projects	\$0	\$0	\$0	\$0
Major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
Non-major Stand Alone IT Procurements	\$0	\$0	\$0	\$0
<b>Total Proposed IT Investments</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

- *Projected Total IT Budget*

	Cost - Year 1		Cost - Year 2	
	General Fund	Non-general Fund	General Fund	Non-general Fund
Current IT Services	\$0	\$0	\$0	\$0
Proposed IT Investments	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

[Appendix A](#) - Agency's information technology investment detail maintained in VITA's ProSight system.

**Capital**

- *Current State of Capital Investments:*

[Nothing entered]

- *Factors Impacting Capital Investments:*

[Nothing entered]

- *Capital Investments Alignment:*

[Nothing entered]

**Agency Goals**

**Goal 1**

Foster the development of a new economic base

**Goal Alignment to Statewide Goals**

- Be a national leader in the preservation and enhancement of our economy.

**Goal 2**

Attract and develop an innovation economy workforce

**Goal Alignment to Statewide Goals**

- Elevate the levels of educational preparedness and attainment of our citizens.
- Be a national leader in the preservation and enhancement of our economy.
- Engage and inform citizens to ensure we serve their interests.

**Goal 3**

Prepare the region to leverage leading-edge information technology

**Goal Alignment to Statewide Goals**

- Elevate the levels of educational preparedness and attainment of our citizens.
- Be a national leader in the preservation and enhancement of our economy.
- Engage and inform citizens to ensure we serve their interests.

**Goal 4**

Promote Southside Virginia as a destination location

**Goal Alignment to Statewide Goals**

- - Be a national leader in the preservation and enhancement of our economy.
  - Engage and inform citizens to ensure we serve their interests.
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Service Area Strategic Plan

**Advanced Learning Research (885)**

3/17/2014 11:30 am

Biennium: 2008-10 ▼

Service Area 1 of 1

**Regional Research, Technology, Education, and Commercialization Services (885 534 21)**

**Description**

The IALR service region includes: Danville City, Pittsylvania County, Franklin County, Halifax County, Henry County, Martinsville City, Mecklenburg County, and Patrick County.

**Background Information**

**Mission Alignment and Authority**

- *Describe how this service supports the agency mission*

The Institute for Advanced Learning and Research (IALR) develops and attracts technology and talent critical to Southside Virginia’s economic prosperity through advanced learning, strategic research and commercialization, outreach programs, and advanced networking and information technology. The IALR will partner with higher education institutions, as well as public and private bodies and organizations in the region, as a means to that end.

One primary goal of this effort is to establish a strong research and development infrastructure enhanced by commercialization activities, which will enable companies to re-locate to the region to be close to the capabilities that enhance their products and services. Another focus is to provide educational programs, in the form of secondary, degree, and continuing education efforts that will increase the region’s skilled labor force and attract higher-paid, technology-driven employment to the region. Also, the IALR is providing information technology leadership in the region to promote the adoption of leading-edge technologies and connect the region ubiquitously to the global marketplace.

Lastly, the IALR through all of these activities and through its conference center, is attracting high-tech companies and intellectual capital to its service region.

- *Describe the Statutory Authority of this Service*

The Institute for Advanced Learning & Research was created by Title 23 - Chapter 16.4 of the Virginia Code. This authority provides for the establishment of the following objectives for the Institute:

1. Seek to diversify Southside Virginia’s economy by engaging the resources of Virginia Polytechnic Institute and State University in partnership with Danville Community College, Averett University, public and private bodies, and organizations of the region and state.
2. Serve as a catalyst for economic and community transformation by leveraging and brokering resources which support economic diversity for the region, particularly within the network economy.
3. Provide a site for the development of the technology and trained workforce necessary for new economic enterprises to flourish in Southside Virginia through instruction, research, outreach, and technology available from its partner institutions.
4. Expand access to higher education in Southside Virginia by providing for adult and continuing education, workforce training and development, and degree-granting programs (undergraduate, graduate and professional programs), through partnerships with the Commonwealth’s private and public institutions of higher education, the City of Danville, County of Pittsylvania, public schools, and public and private sectors in the region.
5. Serve as a resource and hub for network-related initiatives in education, at all levels, and for economic development activities.
6. Assist in regional economic and community development efforts by housing and encouraging research and product-related activities, and encouraging high-technology economic development in the region.
7. Encourage and coordinate, as appropriate, the development of and delivery of programs offered by those educational institutions serving the region.
8. Serve as a resource and referral center by maintaining and disseminating information about existing educational programs, research, and university outreach resources.

**Customers**

Agency Customer Group	Customer	Customers served annually	Potential annual customers
Adult Education Services	Adult Education Services	4,111	243,000

Employers	Employers	75	13,000
K-12 Students	K-12 Students	1,450	47,859
K-18 Educators	K-18 Educators	326	3,500
Nonprofit organizations	Nonprofit organizations	34	253
Resident Graduate Students	Resident Graduate Students	17	60
Small businesses (less than 100 employees)	Small businesses (less than 100 employees)	75	10,500

#### *Anticipated Changes To Agency Customer Base*

As our plans mature and our facilities and personnel continue to come online, the IALR expects to be able to serve an increasing number of diverse constituents throughout our service region and beyond.

#### **Partners**

<b>Partner</b>	<b>Description</b>
Averett University	Founding partner; academic program partner.
City of Danville / Pittsylvania County	Founding partner; funded facility construction for IALR use.
Dan River Business Technology Center	AAPPI has experimentation labs located at the Dan River Business Development Center.
Danville Church-Based Tutorial Program	Outreach program partner.
Danville Community College, Patrick Henry Community College, Southside Community College	Danville Community College is a founding partner, and Patrick Henry Community College, Southside Community College and Danville Community College are academic program partners.
Danville/Pittsylvania Chamber of Commerce	Outreach program partner.
Future of the Piedmont Foundation	Founding partner.
K-18 Schools	(Danville City, Pittsylvania County, Franklin County, Halifax County, Martinsville City, Mecklenburg County, and Patrick County) Partnerships formed to ensure that strategic academic pathways are aligned with K-18 curriculum.
Longwood University	Academic program partner.
New College Institute	Southside Higher Education Coalition partner.
Old Dominion University	Academic program partner; Research program partner.
Southern Piedmont Technology Council	Technology program partner.
Southern Virginia Higher Education Center	Southside Higher Education Coalition partner.
Southside Community Advocates for Learning Excellence United for Progress (SCALE-UP)	Outreach program partner.
United Way	Outreach program partner.
University of Virginia	Academic program partner.
Virginia Commonwealth University	Academic program partner.
Virginia International Raceway (VIR)	VIPER and JOUSTER each have experimentation labs located on the grounds of VIR.
Virginia Tech	Founding partner; Administrative partner; Research partner; Academic program partner; Outreach program partner.

#### **Products and Services**

- **Factors Impacting the Products and/or Services:**

The primary factors which may impact our products and services are funding levels for academic and outreach programs; the ability to attract qualified faculty and staff; and broad economic trends.

- **Anticipated Changes to the Products and/or Services**

As the IALR moves forward, the needs of the region will continue to influence the creation of new programs and initiatives.

- **Listing of Products and/or Services**

- Research and Commercialization
- Advanced Learning
- Outreach
- Community Engagement
- Advanced Networking and Information Technology
- Institute Conference Center

**Finance**

- **Financial Overview**

For the fiscal year that concluded June 30, 2008 the Institute for Advanced Learning and Research was funded by a combination of federal funds, state of VA appropriation (\$5.9 million) and smaller sources such as indirect cost recovery and rental income.

In the new fiscal year beginning July 1, 2008 our state of VA appropriation has been increased to \$6.2 million and increased revenues are forecast for both federal grants and indirect cost recovery. There is no private funding included in the budget for FY 2009.

- **Financial Breakdown**

	FY 2009		FY 2010	
	General Fund	Nongeneral Fund	General Fund	Nongeneral Fund
Base Budget	\$6,235,585	\$0	\$6,560,598	\$0
Change To Base	\$0	\$0	\$0	\$0
<b>Service Area Total</b>	<b>\$6,235,585</b>	<b>\$0</b>	<b>\$6,560,598</b>	<b>\$0</b>

**Human Resources**

- **Human Resources Overview**

N/A - The State does not appropriate positions at IALR.

- **Human Resource Levels**

Effective Date	6/30/2006
Total Authorized Position level	0
Vacant Positions	0
<b>Current Employment Level</b>	<b>0.0</b>
Non-Classified (Filled)	0
Full-Time Classified (Filled)	0
Part-Time Classified (Filled)	0
Faculty (Filled)	0
Wage	0
Contract Employees	0
<b>Total Human Resource Level</b>	<b>0.0</b>

*breakout of Current Employment Level*

*= Current Employment Level + Wage and Contract Employees*

- *Factors Impacting HR*  
N/A - The State does not appropriate positions at IALR.
- *Anticipated HR Changes*  
N/A - The State does not appropriate positions at IALR.

### Service Area Objectives

- The IALR will develop robust research activities which build high tech economic capacity in Southside Virginia.

#### Link to State Strategy

- nothing linked

#### Objective Measures

- Number of Scientists, Technicians, Postdoctoral, and Graduate Students working in the IALR research programs

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description: For FY 2005-2006 there were: 8 scientists, 1 post-doc, 5 technicians, and 9 graduate students.

Measure Target Value:  Date:

Measure Target Description: Increase the number of Scientists, Technicians, Postdoctoral, and Graduate Students working in IALR research programs by 10% annually.

Data Source and Calculation: Data will be obtained from IALR and research partner personnel records. Each scientist, technician, postdoctoral, and graduate students working for or with an IALR research program will be recorded and counted.

- Dollar amount of IALR research expenditures

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description: In FY 2005-2006 research expenditures totaled \$3.9 million

Measure Target Value:  Date:

Measure Target Description: Increase research expenditures by 10% annually.

Data Source and Calculation: Data will be obtained from IALR financial records.

- The IALR will integrate research activities into the private sector to support the creation of an innovation economy in Southside Virginia.

#### Link to State Strategy

- nothing linked

#### Objective Measures

- The number of intellectual property agreements, contract research and development service agreements, and commercial testing contractual agreements with companies and the IALR

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description: 1 research and development contractual agreement in FY 2005-2006.

Measure Target Value:  Date:

Measure Target Description: Increase contracts/intellectual property agreements by 7 annually.

Data Source and Calculation: Measure the number of intellectual property, contract research and development service, and commercial testing contractual agreements with companies and the IALR.

- The IALR will create a workforce for the future through advanced learning programs that are aligned with strategic economic development initiatives.

**Link to State Strategy**

- nothing linked

**Objective Measures**

- Number of students in service region enrolled in credit-based advanced learning courses supported by the IALR

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description: In FY 2005-2006 there were 18 students enrolled in credit-based advanced learning courses.

Measure Target Value:  Date:

Measure Target Description: 15% increase each year in number of students in the IALR service region enrolled in credit based advanced learning courses.

Data Source and Calculation: This measure is calculated by totaling the number of students in the IALR service region enrolled in credit-based advanced learning courses.

- Number of students enrolled in IALR supported academic programs who earn a certificate or degree

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description:

Measure Target Value:  Date:

Measure Target Description: 20 students earning a degree or certificate annually.

Data Source and Calculation: This measure is calculated by totaling the number of students who completed a certificate or degree by the end of the second (Spring) semester.

- The IALR will strengthen the competencies of Southside citizens in science, technology, engineering, math, and entrepreneurship through targeted degree, certificate, and outreach programs.

**Link to State Strategy**

- nothing linked

**Objective Measures**

- Cumulative number of participants in the service region attending IALR sponsored science, technology, engineering, math, and entrepreneurship (STEM-E) programs, workshops, courses, and seminars

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:   
 Measure Baseline Value:  Date:  Measure Baseline Description: In FY 2005-2006, there were 1,688 participants in IALR STEM-E outreach programs.

Measure Target Value:  Date:

Measure Target Description: Increase participation in IALR STEM-E outreach programs by 5% annually.

Data Source and Calculation: This measure is calculated by keeping a running total of all of the registrations for IALR outreach, community engagement, and new economy programs that are focused on STEM-E topics.

- Dollar amount of IALR program expenditures in non-research areas

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:   
 Measure Baseline Value:  Date:

Measure Baseline Description: In FY 2005-2006 non-research program expenditures totaled \$1.2 million

Measure Target Value:  Date:

Measure Target Description: Increase non-research program expenditures by 10% annually.

Data Source and Calculation: Data will be obtained from IALR financial records.

- The IALR will introduce private sector businesses to opportunities in the Southside region through contracts with IALR programs and services.

#### Link to State Strategy

- nothing linked

#### Objective Measures

- The number of visits by private sector businesses who contract for IALR programs and services.

Measure Class:  Measure Type:  Measure Frequency:  Preferred Trend:

Measure Baseline Value:  Date:

Measure Baseline Description: In FY 2005-2006 there were 106 private businesses who contracted with the IALR

Measure Target Value:  Date:

Measure Target Description: Increase the number of private businesses contracting with the IALR by 10% annually

Data Source and Calculation: This data will be collected from IALR conference center and office of sponsored programs records.

- The IALR will be prepared to act in the interest of its faculty, staff, students, visitors, and infrastructure during emergency situations by actively planning and training.

#### Link to State Strategy

- nothing linked

#### Objective Measures

- Assess our Continuity of Operations Plan (COOP) and determine an assessment score that reflects the percentage of 24 COOP requirements that IALR has completed

Measure Baseline Description: 2007 COOP Assessment Results (% out of 100)

Measure Target Value:  Date:

Measure Target Description: Achieve at least 75% compliance in 2007 and increase score by 5% annually thereafter.

Data Source and Calculation: The COOP Assessment Review is a 24-component assessment tool that helps measure the viability of a COOP plan.