SUNY RF

The Research Foundation for The State University of New York

Fiscal Year 2012

Operating Plan

Supporting the RF's services and strategic goals

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Annual Budget

Sources of Funds

		2011 Actual	2012 Projected
	Generated by Services	(millions)	
1	**Sponsored Programs Administration**		
1.1	Grants and contracts direct dollars	$794.9	$766.7
1.2	Grants and contracts indirect dollars	145.6	138.0
1.3	Gifts & Other	10.4	8.0
	Subtotal for Sponsored Programs Administration	950.9	912.7
2	**Commercialization Support Services**		
2.1	Royalties from licensees	11.5	8.1
2.2	Shared services to campus related organizations direct dollars	166.5	195.2
2.3	Cost recoveries for shared services	5.7	6.4
2.4	Fees paid by third parties using Service Centers	4.5	3.4
2.5	Equity distribution from Brookhaven Science Associates	1.8	1.8
	Subtotal for Commercialization Support Services	190.0	214.9
3	Generated through Investment	14.1	11.1
	Total	$1,155.0	$1,138.7

Uses of Funds

		2011 Actual	2012 Projected
4	Direct Costs Specified by Funding Source	(millions)	
4.1	Grants and contracts direct dollars	$794.9	$766.7
4.2	Shared services to campus related organizations direct dollars	166.5	195.2
	Subtotal of Direct Costs	961.4	961.9
5	Allocated by RF Board		
5.1	Campus operations and research support	144.8	131.7
5.2	Central office operations and collaboration support	27.2	27.6
5.3	SUNY strategic plan support	2.6	2.6
5.4	Royalties paid to inventors (40% of total)	4.6	3.2
5.5	Corporate reserve	2.2	2.4
5.6	Investment reserve	12.2	9.3
	Subtotal of Allocations	193.6	176.8
	Total	$1,155.0	$1,138.7

Projected Spending

		2011 Actual	2012 Projected
	Projected Spending	(millions)	
	Sponsored Programs & shared Services Direct Spending	$961.4	$961.9
	Board-Allocated Funds	163.6	162.5
	Corporate Reserve	.7	.7
	Total	$1,125.7	$1,125.1

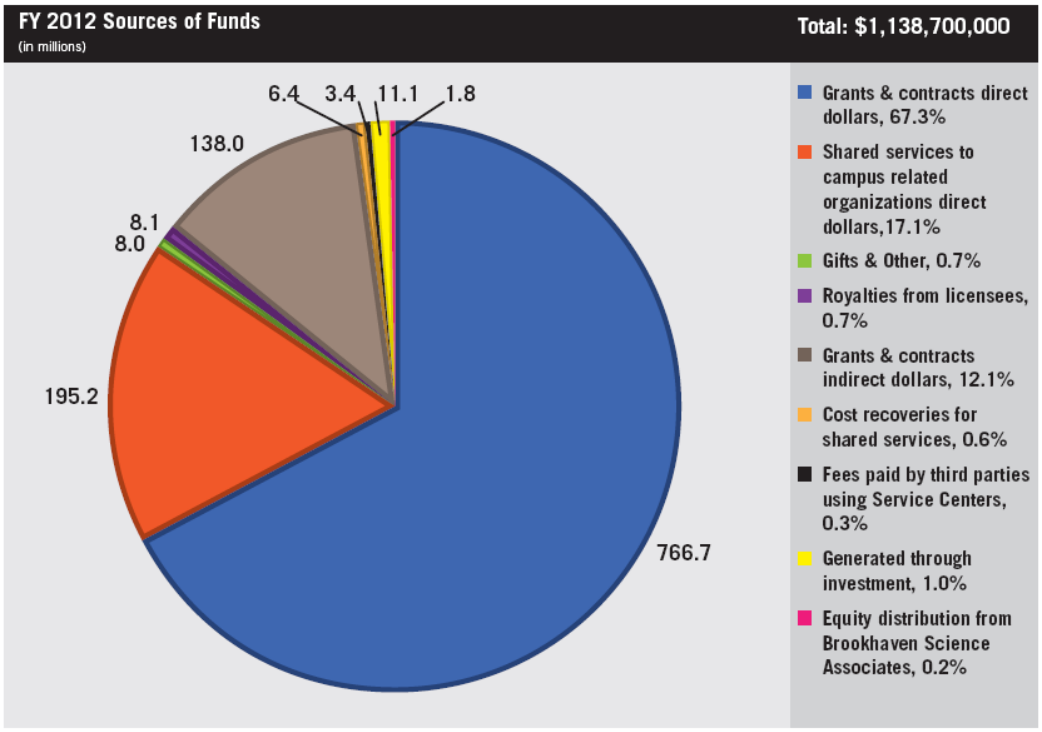
SUNY Budget Request

SUNY and the Research Foundation are seeking New York State funding for programs in support of Goals 2 and 3 of the RF strategic plan. See the action steps on pages 8 and 9 and the detailed program proposal descriptions in Appendixes A (page 18) and B (page 21).

Program Proposal	**2012 Request (millions)**
Research and Innovation	
SUNY/RF Research Collaboration Fund	$ .75 *
NY SUNY Innovators Program	10.0
SUNY REACH (Research Excellence in Academic Health)	9.5
Small Business Innovation Research Program (SBIR) Matching Grants	5.0
Subtotal Research and Innovation	24.5
Commercialization and Development	
SUNY Technology Accelerator Fund	1.0
SUNY Entrepreneur-in-Residence Program	1.0
SUNY Pre-seed Fund	5.0
SUNY Patent Pool	.75
SUNY Facilities Access	.75
SUNY Regional Technology Business Service Centers	2.5
Subtotal Commercialization and Development	11.0
Total	$34.5

* SUNY and the RF have provided $700,000 to initiate the fund in 2012.

Narrative on Sources of Funds in 2012



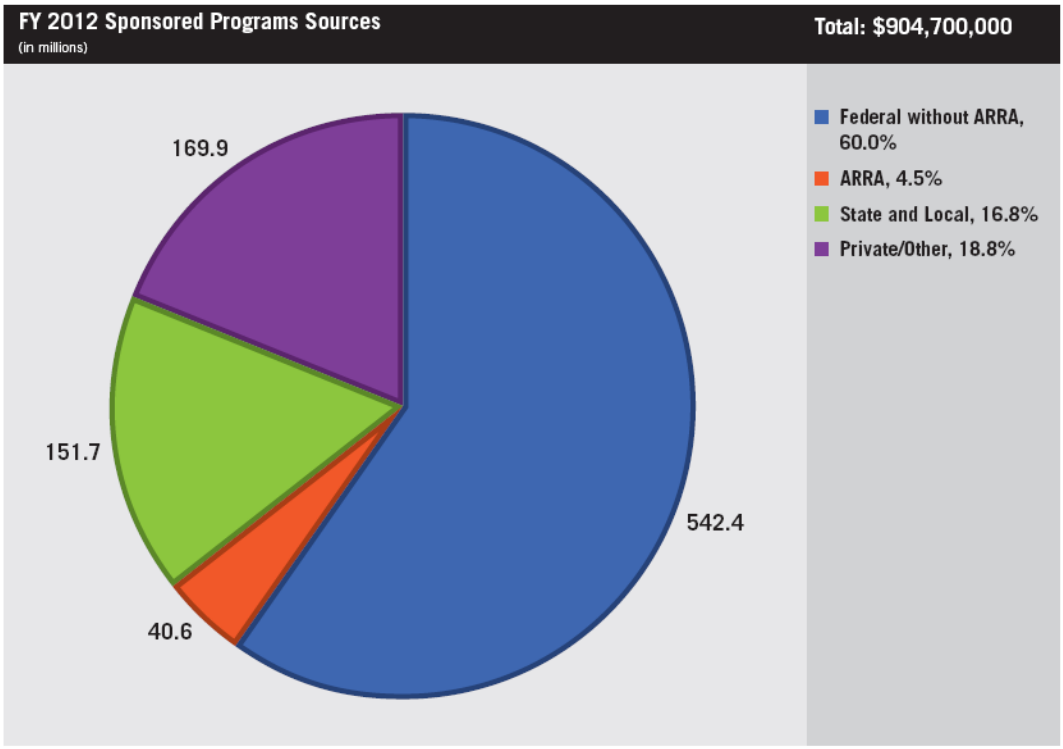
Total funds will decrease from $1.15 billion to $1.14 billion in 2012.

1. Sponsored Programs Administration: $912.7 million

Funds for Sponsored Programs Administration come from sponsors in the form of direct dollars, which are for things that can be identified specifically with a particular sponsored project, and indirect dollars (called "facilities and administrative" by the federal government), which are reimbursements by sponsors for things that cannot be directly and uniquely assigned to any particular project (sometimes called overhead).

1.1 *Grants and contracts direct dollars.* In FY2012, funds for direct expenses on sponsored programs are projected to decrease from $794.9 million to $766.7 million. The decrease is attributable to the slowing of federal funding provided through ARRA (American Recovery and Reinvestment Act) and campuses conducting fewer programs funded by New York State.

1.2 *Grants and contracts indirect dollars.* In FY2012, indirect dollars are projected to decrease from $145.6 million to $138 million. The ratio of indirect to direct is expected to remain relatively flat at 18%, so a decrease in indirect dollars can be expected based on the projected decrease in direct dollars.



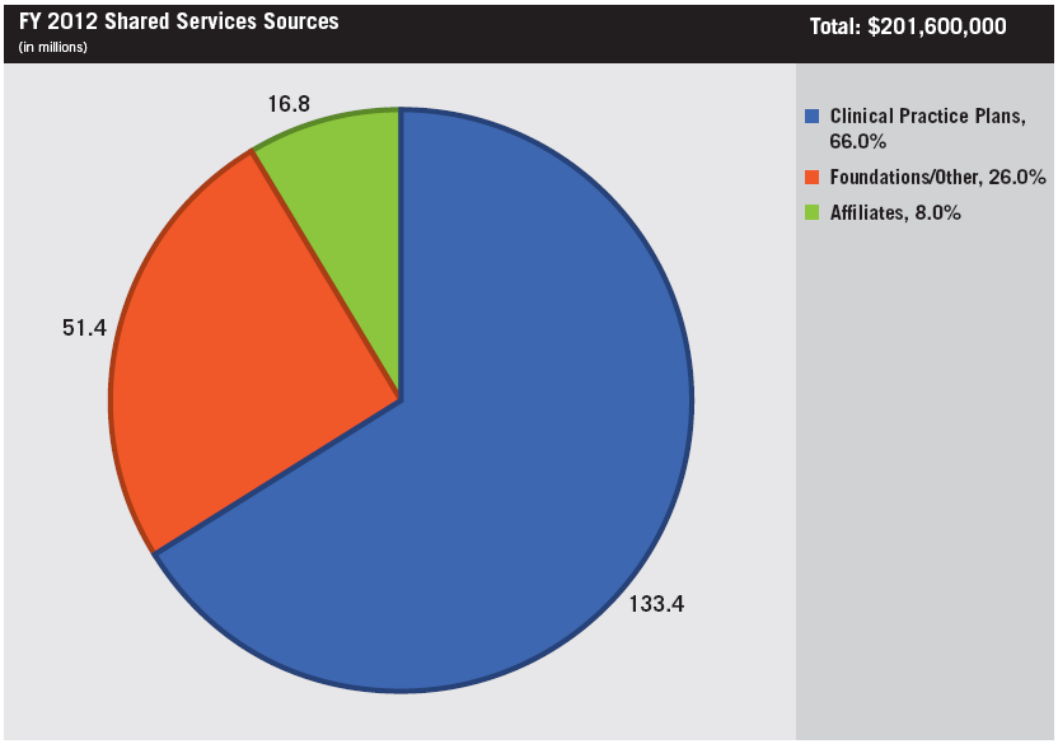
1.3 *Gifts and other*. The RF receives funds given as gifts. Gifts differ from grants or contracts in that they are not given with terms and conditions such as specific time periods in which the funds must be spent or financial reporting requirements. In FY2012, the RF expects this funding to decrease from $10.4 million to $8 million.

2. Commercialization Support Services: **$214.9 million**

2.1 *Royalties from licensees.* Traditional IP commercialization generates royalties from companies that have licensed RF-owned intellectual property. Royalties are projected to decrease from $11.5 million to $8.1 million in 2012. The decrease is due to the fact that long-standing licenses as they age are no longer generating as much revenue as they did previously. In spite of a projected decrease in royalties, IP activity on campuses is strong, with some campuses anticipating record numbers of new technology disclosures and licenses in FY2012.

2.2 *Shared services to campus related organizations direct dollars.* Campus-related organizations using RF human resources, payroll and purchasing/payables administration services (for example, clinical practice plans and campus-based foundations) will see an increase in direct dollars from $166.5 million to $195.2 million.

2.3 *Cost recoveries for shared services.* The recovery of costs associated with providing shared services to campus-related organizations will increase from $5.7 million to $6.4 million.



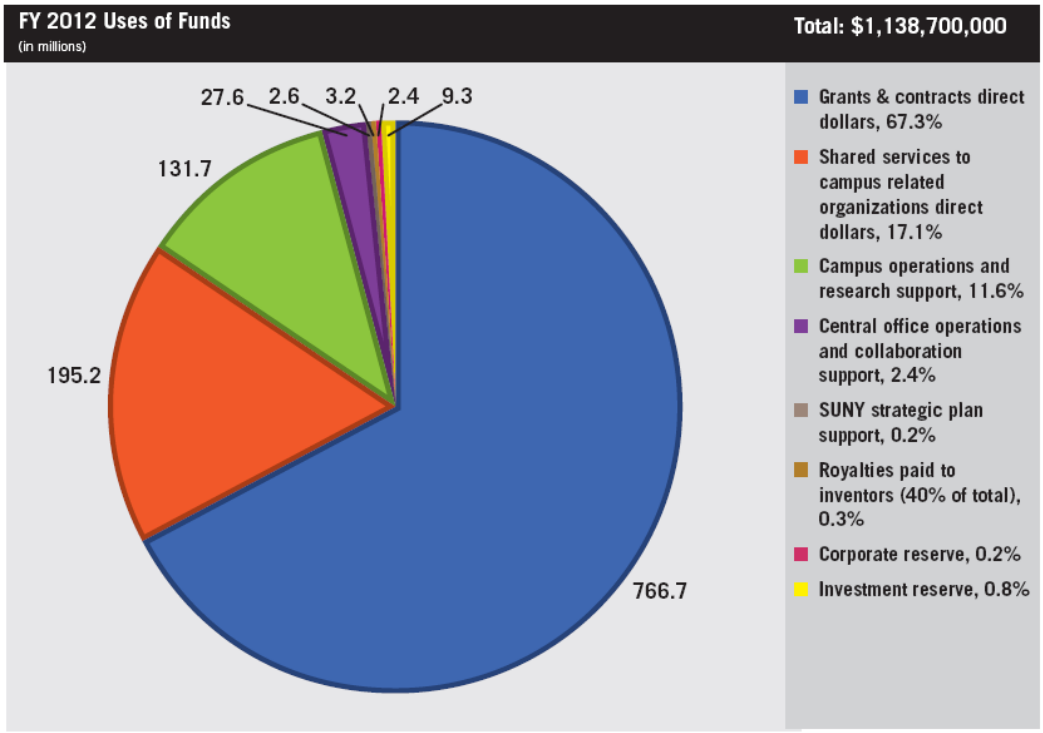
2.4 *Fees paid by third parties using Service Centers.* The RF recovers costs from outside parties using RF-owned facilities such as an MRI facility or nanotechnology clean room. This activity is projected to decrease from $4.5 million to $3.4 million in FY2012.

2.5 *Equity Distribution from Brookhaven Science Associates.* The RF is a partner in Brookhaven Science Associates LLC (BSA), which runs Brookhaven National Laboratory. The LLC provides equity distributions to the members. It is anticipated that in FY2012, equity distributions will remain flat at $1.8 million.

3. Funds Generated through Investment: $11.1 million

Strong equity markets are causing investment returns to exceed projections in FY2011, generating close to $14.1 million in income. For FY 2012, the RF will use a more conservative estimate of $11.1 million.

Narrative on Uses of Funds in 2012



- Uses of direct costs specified by the funding source equals the sources of these costs and are increasing in direct proportion (from $961.4 in FY2011 to $961.9 in FY2012).
- Allocations to campuses, reserves, central office and SUNY are projected to decrease from $193.6 million in 2011 to $176.8 million in 2012.
- Spending of allocated funds is projected to decrease from $163.6 in 2011 to $162.5 million in 2012.

4. Direct Costs Specified by Funding Source

Much of the anticipated use of funds in FY2012 directly correlates to the sources of funds, as the provider of the funds specifies the use of the funds. This is true for grants and contracts direct dollars and shared services to campus related organizations direct dollars.

5.1 *Direct costs on sponsored projects*. Expenditures in FY2012 will be the same as the anticipated direct funding: $766.7 million.

5.2 *Direct costs from shared services to campus related organizations*. Expenditures in FY2012 will be the same as the anticipated direct funding: $195.2 million.

5. Allocated by RF Board

6.1 *Campus operations and research support*. According to RF board policies, funds allocated to campuses for expenditure include indirect costs reimbursed to the campus, investment income earned on unspent campus funds (if applicable), equity distributions from Brookhaven Science

Associates (specifically to Stony Brook University), the 60% share of royalties earned by an inventor's campus, plus "gifts and other" allocable to the particular campus. Campus allocations are expected to decrease from $144.8 million in 2011 to $131.7 in 2012.

Note: The reduction is due to reduced indirect cost recoveries. There continues to be no allocation of investment income in FY2012 as the RF rebuilds the investment reserve.

Campuses will spend allocations to support the research enterprise. Note that in accordance with the Bayh-Dole Act, royalties *must* be used to support research. Campus expenditures will decrease to $130.8 million in 2012, down from $131 million in 2011. Some of this decrease is due to anticipated shortfalls in F&A recovery.

Note on Total Cost of Research

A Research Foundation study has shown that recoveries are not equal to amounts spent on facilities and administration in support of research on campuses. The ratio of total earned indirect costs to the total cost of research at eight campuses ranges from 27% to 65%. Under recovery occurs because:

- Research disciplines demand high numbers of trained and certified professionals
- There is a high volume of regulatory requirements, especially for federal R&D
- OMB Circular A-21 imposes a 26% limitation on reimbursement of the administrative component

Facilities costs are increasing due to the costs of specialized equipment and core facilities as well as the high cost of managing and maintaining research space.[1]

6.2 *Central office.* The allocation in support of the RF central office will increase slightly in 2012 from $27.2 *to* $27.6. The allocation is derived using an assessment formula: 2.7% of revenues (all campuses) plus 1% of revenues (centralized campuses for sponsored program support). The "revenues" base is less equipment and comprises the weighted average of total revenue for the past three years: 50% prior year, 30% two years prior, 20% three years prior. In 2012 Upstate Medical University will be decentralized for sponsored program support; because of this, the central office allocation is $380k less than the assessment formula would prescribe.

Operations

The majority of the assessment will be used for central office operations, which provide a centralized infrastructure in support of the SUNY research enterprise around the state and around the world. In recognition of the unprecedented national, state, and university economic

[1] Finances of Research Universities, **Author:** COGR | **Published Date:** 3-1-2008

Recommendations to the National Research Council on Regulatory and Financial Reform of Federal Research Policy, **Author:** COGR, AAU and APLU | **Published Date:** 3-22-2011

condition, the central office will provide no across-the-board (cost of living) increase and no discretionary increase to employees at central office in 2012.

Collaboration support

The RF will use funds in support of the strategic plan on projects, services and other initiatives that support collaboration. The RF has reduced the cost of operations over the past several years to put funds in a central office reserve, which will be used in FY2012 to make major strides toward strategic goals, primarily the support of collaboration.

Strategic Goal 1 of The Research Foundation's Strategic Plan is to "provide outstanding sponsored program administration services and stewardship to the SUNY community (faculty, students and staff) and sponsors, respectively."

The *strategies* under Goal 1 are to

- provide tools and processes to ease the administrative burden on faculty.
- address areas of major corporate compliance risk.
- ensure that RF resources are deployed effectively across the enterprise to meet campus customer needs.

In 2012, the RF plans to execute *projects* to reach the following outcomes:

- Allow faculty to electronically submit their federally mandated **effort reports**, which will relieve a burden on them, reduce paper, and ensure compliance.
- Improve the **access to systems** across the sponsored program lifecycle and the **reporting tools** we provide to faculty and administrators to enable better data-driven decision making.
- Collaborate with System Administration to strengthen the RF and SUNY **compliance program** related to research and sponsored programs. A primary area of focus will be **conflict of interest.**
- Pool the collective power of SUNY's research community to advocate for changes to **federal administrative requirements** that are duplicative, burdensome, or conflicting.
- Put in place programs to increase the RF's **diverse and inclusive community**, including partnering with SUNY to increase procurements from minority and women owned business enterprises.
- As part of the upgraded Oracle applications, create an **integrated business system** that supports the lifecycles of traditional sponsored programs, IP commercialization and non-traditional research supported economic development programs.
- Ensure the RF's **position classification structure** meets PI needs to attract and retain talented teams.
- Complete a **customer needs assessment** in support of a modified resource allocation model.

Strategic Goal 2 of the RF's plan is to "assist campuses in increasing sponsored program funding."

The *strategy* within Goal 2 is to leverage research strengths that exist on the SUNY campuses to develop tangible research partnerships and collaborations that lead to competitive sponsored program proposals to federal and other sponsors.

In 2012, the RF plans to execute the following *projects*:

- Staff and support the work of the **SUNY Research Council**, which will advise the SUNY Provost at the strategy level.
- Fund and support the **SUNY/RF Research Collaboration Fund**, which will be established to encourage inter-SUNY collaborative research proposals.
- Complete business plan to support system-wide **pre-award information system** to ensure completely integrated sponsored program reporting. Assess status of Coeus-Kuali implementation and make appropriate recommendations. (See project under Goal 1 to create an integrated business system.)
- Collaborate with SUNY to obtain funding support for programs that will help to increase SUNY's research base, including the **NYSUNY Innovators Program, SUNY REACH,** and **Small Business Innovation Research Matching Grants**. See Appendix A for a summary of these programs.
- Support **SUNY's federal relations program**, especially as it relates to increasing targeted proposals to major federal agencies.
- Fund a system-wide license for the COS suite of tools, including COS Funding and Scholar Universe and the customized **Find a SUNY Scholar** database.
- In coordination with the SUNY Faculty Senate and System Administration, host a **state-wide conference on sustainability**.

Strategic Goal 3 is to "increase technology transfer and commercialization in support of SUNY's efforts to revitalize New York's economy."

The *strategy* within this goal is to support the growth and alignment of SUNY assets (research programs, intellectual property, facilities) in and across New York State's ten economic development regions through activities that increase university-industry partnerships, leverage investments, stimulate commercialization, support existing New York firms, and aid in new business creation.

In 2012, the RF plans to execute the following *projects*:

- Staff and support the work of the **SUNY Patents and Inventions Policy Board**, which will define policy objectives and interpret policy and will oversee the general direction of IP commercialization at SUNY.
- Continue support of the demonstration project within the **Technology Accelerator Fund**, which provides funding for promising technologies to help mature them to the stage where they can attract conventional commercial investment.
- Collaborate with SUNY to obtain funding support for programs that will help to achieve the entrepreneurial century goals, including the **Technology Accelerator Fund, SUNY Entrepreneur in Residence** program, the **SUNY Pre-Seed Fund**, the **SUNY Patent Pool**, the **SUNY Facilities Access Pool**, and **Regional Technology Business Services Centers**. See Appendix B for a summary of these programs.
- Continue to provide system-wide support for the **Inteum database** as the business system in support of IP commercialization. (See project under Goal 1 to create an integrated business system.)
- Promote SUNY's **assets that support industry** such as incubators, Centers of Excellence and Centers of Advanced Technology and other research facilities.
- Establish an **RF Board Committee** on Research Supported Economic Development and review financial models that will allow the RF to sustainably support major economic development programs.

The RF will also continue to support:

- regional IP commercialization counsels. These external, private attorneys work in partnership with the RF's legal office to support IP commercialization hub directors.
- procurement of shared tools and a wiki to facilitate fast and informed decision making.
- master agreements with industry.

6.3 *SUNY strategic plan support*. The RF will allocate funds in support of implementation of the SUNY Strategic Plan. The allocation will remain flat at $2.6 million. This allocation is derived by a formula (.3% of last three years weighted average revenues).

6.4 *Royalties paid to inventors.* The SUNY Patent Policy dictates that 40% of royalties be paid to the inventor of intellectual property. In 2012, this will decrease from $4.6 million to $3.2 million.

6.5 *Corporate reserve*. In FY2012, the corporate reserve will be allocated $2.4 million by funding from investment income. The RF's board of directors agreed on a goal to maintain the reserve at 10% of indirect cost recoveries. In 2012, the reserve will represent 5% of indirect cost recoveries. Prior approval from the board has been granted to spend $2.9 million from the Corporate Reserve in support of litigation and union costs. To date, $2.2 million has been spent and the remaining $725 thousand will be spent in FY 2012.

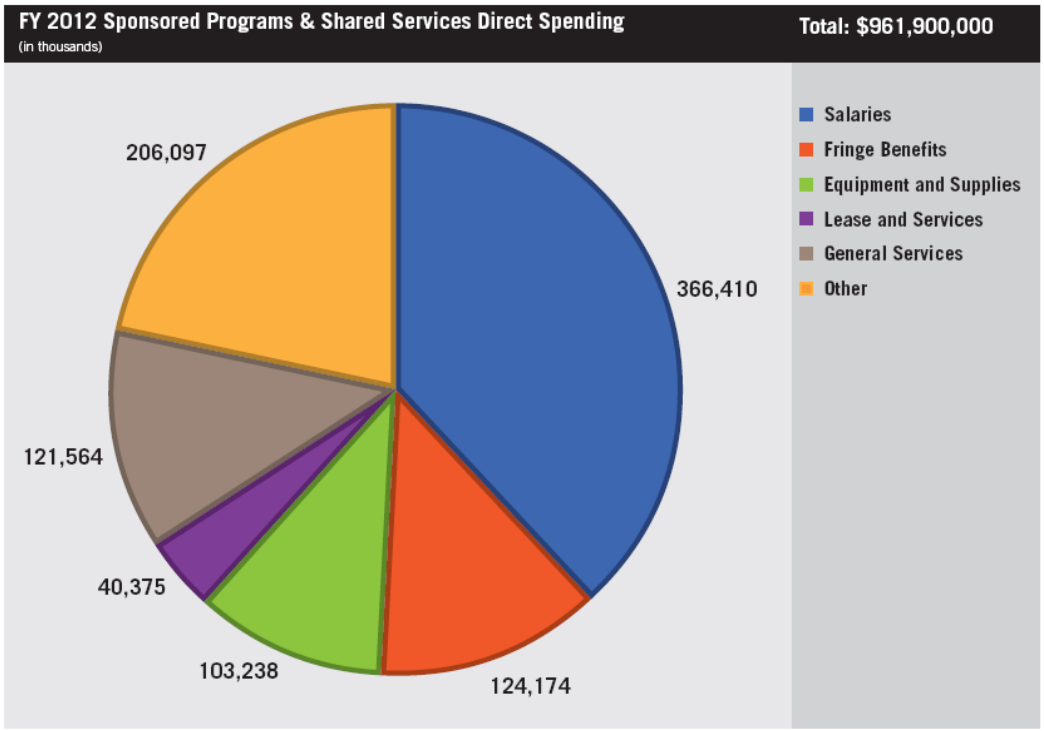
	2011 Actual	2012 Proj.
Rollforward (in thousands)		
Opening balance	$4,925	$5,059
Sources:		
Investment income allocation	2,173	2,391
Uses:		
Allocation for strategic initiatives	(1,366)	0
Outside legal costs	(673)	(725)
Ending balance	$5,059	$6,725

6.6 *Investment reserve*. Investment income will fund $9.3 million in FY 2012 to investment reserves. The reserve was established to help ensure campuses receive a known, predictable and constant distribution of investment income. The RF is rebuilding the reserve due to losses that resulted from down markets and no investment income will be allocated to the campuses for a three-to-four year period.

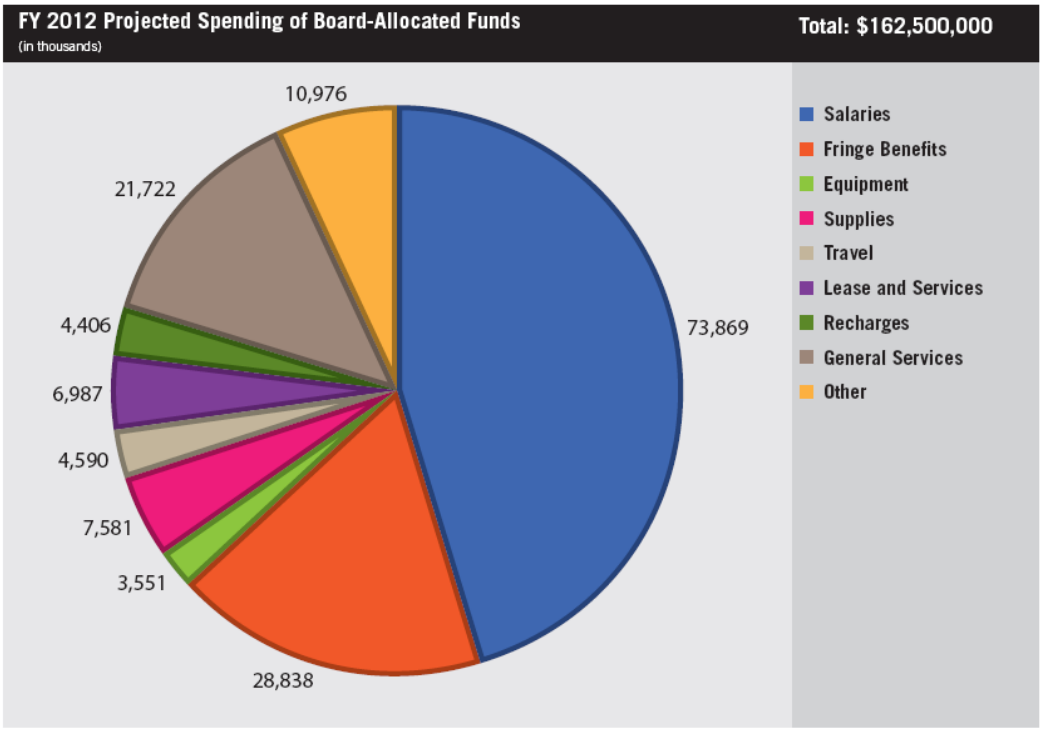
Analysis of cash position: Based upon projected revenues and expenditures and assuming no significant change in accounts receivables (A/R) or deferred revenues, we expect cash to remain stable and increase slightly in FY 2012. If there are delays in payment from sponsors and a growth in A/R, the RF has access to a $65 million line of credit to smooth out or eliminate the risk of short term cash deficits.

Projected Spending

Nearly half of the RF's total expenses are for salaries and benefits for the people who work on programs. Their work on diverse research, instruction and training, public service, and other scholarly and creative activities makes life better for people across the state and around the world.



The RF's campus and central office locations incur costs associated with maintaining sufficient infrastructure to support research activity and adequate staff to administer sponsored programs and provide other services. The RF uses the allocations it receives to pay for these expenditures.



Salary Plan

Based on current and projected economic, budget and market conditions, and projected sponsored research funding, the RF's salary plan for 2012 calls for:

Employee Type	Cost of Living	Discretionary Pool
Administrative	0%	2%
Sponsored Program	0%	Based on funds availability within each sponsored program

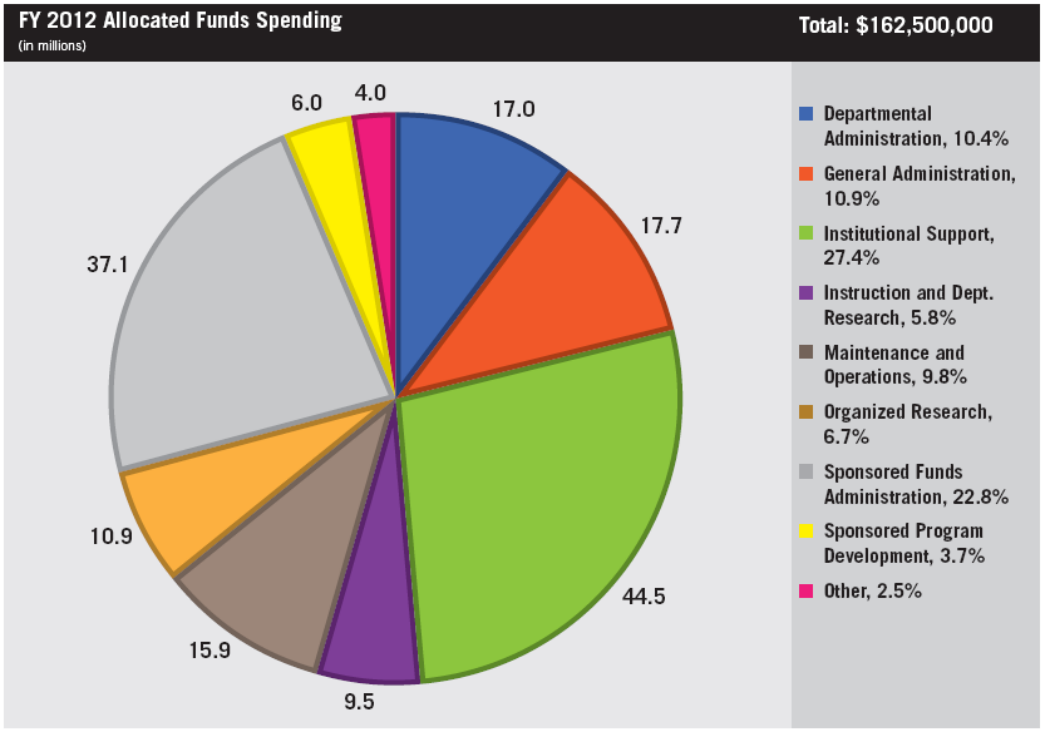
Campuses will determine their implementation of the salary plan. They may request a waiver if circumstances require.

Fringe Pool

A strong employee benefit program is important for recruiting and retaining employees. The RF recovers the funds needed for the cost of employee fringe benefit programs, which include health insurance, retirement, Social Security, and other payments, by applying fringe benefit rates to accounts that fund employee salaries and wages. These rates are negotiated each year with the US Department of Health and Human Services.

In FY2012, the projected unfunded balance in the regular fringe benefit pool will increase from $8.3 million to $11 million. In 2012, the RF is committed to keeping the provisional fringe benefit

rate for regular employees at 41.5%. See the section “Beyond 2012” for the fringe benefit rate outlook.



Beyond 2012

Sources of Funds (millions)

The following table is derived from estimates of funding provided by the RF offices on SUNY campuses.

		2011 Actual	2012 Proj.	2013 Proj.	2014 Proj.	2015 Proj.	2016 Proj.
	Generated by Services						
1	**Sponsored Programs Administration**						
1.1	Grants and contracts direct $	$794.9	$766.7	$750.3	$746.5	$754.9	$771.5
1.2	Grants and contracts indirect $	145.6	138.0	134.8	135.3	136.0	138.5
1.3	Gifts & Other	10.4	8.0	8.0	8.0	8.1	8.2
	Subtotal for Sponsored Programs Administration	950.9	912.7	893.1	889.8	899.0	918.2
2	**Commercialization Support Services**						
2.1	Royalties from licensees	11.5	8.1	8.1	9.1	9.7	9.8
2.2	Shared services to campus related Organizations direct $	166.5	195.2	202.0	190.5	197.6	205.1
2.3	Cost recoveries for shared services	5.7	6.4	6.7	6.8	7.2	7.6
2.4	Fees paid by third parties using Service Centers	4.5	3.4	3.4	3.5	3.5	3.5
2.5	Equity distribution from Brookhaven Science Associates	1.8	1.8	1.8	1.9	1.9	2.0
	Subtotal for Commercialization Support Services	190.0	214.9	222.0	211.8	219.9	228
3	Generated through Investment	14.1	11.1	11.9	13.1	14.4	16.1
	Total	$1,155.0	$1,138.7	$1,127.0	$1,114.7	$1,133.3	$1,162.3

Looking ahead to fiscal years 2013 through 2016, total funds are projected to decrease year-to-year before rebounding to 2011 levels.

- Reflecting national trends for R&D funding at universities, SUNY campuses estimate that sponsored program funds (direct) will change only moderately over the next four year period. The campus estimates have been traditionally conservative over the years, but forecasts consider that the proposed federal R&D portfolio in FY 2012 is $148.9 billion, a slight decrease of 0.3 percent or $401 million over FY 2010. The President's budget does include significant increases for certain federal R&D mission agencies (e.g. NIH proposed increase of 3.3%, NSF increase of 12.1%). However, the outcome of federal R&D budget deliberations will not be known until autumn 2011, and the deliberations are occurring in a financial climate where growing deficits may likely compel Congress to impose caps on discretionary spending—including R&D. [2]
- State and local government funding estimates are also flat, given fiscal challenges affecting these entities, including proposed reductions in contractor and third party expenditures where most R&D and projects are budgeted and funded.

[2] Research and Development FY 2012, **Author:** American Association for the Advancement of Science (AAAS)

- Industry funding indicates a slight uptick, and this is due primarily to estimated increases in activities of the College of Nanoscale Sciences and Engineering (CNSE) in Albany.
- See Appendix C for projections by sponsor type.
- Campus estimates for reimbursement of F&A (indirect costs) are slated to be flat over the same period for all sources of funding.
- Royalties from IP commercialization are expected to decrease from $11.5 million to $8.1 million and bounce back to 9.8 million by 2016.
- Campus-related organizations and other public/private partnerships are also expected to experience relatively flat funding.
- Investment income is expected to bounce back and increase to $16 million by 2016.

Uses of Funds (millions)

		2011 Actual	**2012 Proj.**	**2013 Proj.**	**2014 Proj.**	**2015 Proj.**	**2016 Proj.**
1	Direct Costs Specified by Funding Source						
1.1	Grants and contracts direct $	$794.9	$766.7	$750.3	$746.5	$754.9	$771.5
1.2	Shared services to campus related organizations direct $	166.5	195.2	202.0	190.6	197.7	205.1
	Subtotal of Direct Costs	961.4	961.9	952.3	937.1	952.6	976.6
2	Allocated by RF Board						
2.1	Campus operations and research support	144.8	131.7	128.8	140.4	144.6	149.1
2.2	Central office operations and collaboration support	27.2	27.6	27.6	27.3	27.3	27.6
2.3	SUNY strategic plan support	2.6	2.6	2.6	2.6	2.6	2.6
2.4	Royalties paid to inventors (40% of total)	4.6	3.2	3.3	3.6	3.8	3.9
2.5	Corporate reserve	2.2	2.4	2.6	3.3	1.1	1.1
2.6	Investment reserve	12.2	9.3	10.0	0.4	1.3	1.4
	Subtotal of Allocations	193.6	176.8	174.7	177.6	180.7	185.7
	Total	$1,155.0	$1,138.7	$1,127.0	$1,114.7	$1,133.3	$1,162.3

- Campus operations and research support will increase but not significantly over the next five years.
- Central office operations and collaboration support, if it continues to be driven by the same assessment formula, will remain flat.
- SUNY strategic plan support will remain flat.
- Royalties paid to inventors will increase slightly relative to royalty revenue.

- The corporate reserve will increase relative to investment income. The funding calculation is 1.5% of the cash invested. It is projected that the corporate reserve will hit the recommended balance of 10% of indirect cost recoveries in FY 2015.

- The investment reserve allocations from investment income will decrease in FY 2014 due to the reserve reaching a set balance based on a spending formula. Campuses will start receiving investment income as part of their allocation again in FY 2014.

Expenditures

- *Salaries*. Campuses and central office estimate that expenditures on salaries and wages will remain flat over the next five years in alignment with expected flat funding.

- *Fringe Benefits*. The cost of benefits is increasing based on rising health insurance costs, unemployment claims and vacation payouts. The current and projected future fringe benefit rates by fringe pool are:

Fiscal Year	Regular	Graduate	Undergrad	Summer
2012	41.50	13.00	5.00	17.00
2013	43.00	14.50	5.00	17.00
2014	43.00	16.00	5.00	17.00
2015	43.50	17.50	5.00	17.00
2016	44.50	18.50	5.00	17.00

The RF modified the cost sharing within the retiree health plan to address one component of the increasing cost of fringe benefits. The RF has committed to completing benchmarking and analysis of benefits programs against peer institutions every two years.

Conclusion

The Research Foundation is an enabler of exciting and creative research, entrepreneurship and economic development and will continue to focus on implementing the strategic plan to grow through innovation and collaboration. In 2012, total funding is expected to only decline slightly by 1.4%. Of the projected $1.1 billion in funding, almost 85% will fund direct expenditures on specific programs. Grants and contracts are still strong, with 65% being funded by the federal government (5% of that total is ARRA funding). Cash flow projections indicate that the corporation is in a good position to support campus research in the coming years. Looking forward, the work of the RF and SUNY task forces reviewing the RF-SUNY relationship will assist the RF with defining a sustainable model for supporting the RF central office and campus operations.

Introduction to the Research Foundation

Founded in 1951, the RF exists to serve SUNY and to capitalize on the scope, scale and diversity of SUNY as an engine of New York state's innovation economy.

The RF supports nearly $1 billion in SUNY research activity annually, providing sponsored programs administration and commercialization support services to SUNY faculty performing research in life sciences and medicine; engineering and nanotechnology; physical sciences and energy; social sciences, and computer and information sciences.

Visit www.rfsuny.org and connect with the RF on Facebook. Learn about the Power of SUNY at www.suny.edu.

Appendix A: SUNY Research & Innovation 2012 Program Proposals

Research is a major producer of intellectual capital and its entrepreneurial programs create a pathway to translate the breadth and depth of research discoveries into economic development opportunities. With government, business and industrial partners, researchers advance knowledge, discovery and innovation that can translate into real solutions to today's challenges in health care, energy, manufacturing, safety, security and information technology, and have a major economic impact, creating jobs and new commercial products.

To realize its full potential to be a center of innovation, the State of New York needs to develop an innovation ecosystem that effectively integrated industry, universities and investment capital. To achieve this goal, New York must do more to convert its tremendous research capacity into sustainable economic impact. The State University of New York (SUNY), as the largest public system of higher education in the country, is well positioned to play a significant role in this effort.

SUNY/RF Research Collaboration Fund

The SUNY/RF Research Collaboration Fund has been established to support multi-disciplinary, multi-investigator, multi-campus research projects, to fund pilot studies needed to generate preliminary results and data necessary to provide a basis for, or add credibility to, more advanced, larger-scale proposals for future funding. The objective of the Fund is to encourage the development of collaborative proposals in areas that will provide the initial foundation for long term, sustainable research partnerships. Projects could range from basic science to applied, translational and clinical research.

A review panel convened by the SUNY Research Council and composed of representatives from SUNY doctoral campuses will review proposals and select grantees for awards of up to $50,000 per year, for a maximum of 2 years. The criteria for selection will be primarily the ability of the funding to leverage growth of collaborative research opportunities to build SUNY's research profile. Other considerations will be originality and significance of the research, relevance to needs and opportunities in New York State and the nation, potential for growth, and ability to attract future federal, state, philanthropic or private funding.

SUNY and the Research Foundation have established the Fund with $700,000.

REQUESTED FUNDING: Additional $750,000

Talented faculty and staff form a critical mass that is magnetic for additional talented individuals, new projects and investment. These key people develop research projects, clinical care activities, intellectual property and educational activities that contribute to development while providing growth and mentoring opportunities for existing staff.

NY SUNY Innovators Program

The 5 year NY SUNY Innovators Program (SIP) will enable SUNY to recruit the best and brightest researchers to campuses. Modeled on the Empire Innovation Program and other best practices, SIP will recruit the most successful out-of-state life science and energy researchers and engineers who will be 'game changers' and whose impact will extend beyond the results of their own research, thereby catalyzing a culture of excellence and entrepreneurial activity across the state. Each SIP grant would be from $500k to $2M per SUNY Innovator, with a campus contribution no less than the amount of the SIP grant. SIP leverages SUNY and State resources by requiring significant matching funds from campuses, including philanthropic support. The program is designed to provide only one-time awards for start-up costs, equipment and lab renovations. Long term support for salary and benefits would come from SUNY. Metrics within the SUNY report card would be used to monitor the progress of SIP. An independent scientific review board would make the final selection of all recruits who qualify for SIP funding.

REQUESTED FUNDING: $10M each year for a 5 year period, for a total of $50M.

SUNY REACH (Research Excellence in Academic Health)

SUNY REACH is a phased investment in the people, core facilities, and information technology at 5 campuses, helping those partners make much more tangible connections. The program brings SUNY Upstate Medical University, SUNY Downstate Medical Center, Stony Brook University, the University at Buffalo and the College of Optometry together to form one super research institution. The initial $600k investment in SUNY REACH has already paid off. We have received over $8 million in extramural grants in just two years. That's a significant return on the initial modest investment. Most recently, the National Institutes of Health awarded two large grants of $3.7 million and $650,000 to SUNY researchers to investigate new medical treatments.

SUNY REACH Phase 2 seeks to accomplish the following goals:

1. Establishing the institutional size and structure needed to place SUNY AHCs in the best position to vie for Clinical Translational Science Awards;
2. Expanding the Clinical and Translational Research (CTR) network beyond the CRO model to provide a creative and flexible resource for expanded collaboration and growth of investigator-initiated research, and to serve as a training ground for the next generation of clinical investigators.
3. Developing a unified structure that builds on the existing strengths — including its successful biotech parks and incubators — to speed industry partnerships and translational research;

1. Beginning research collaborations between the SUNY REACH partners in the Cancer; Infectious Diseases and Emerging Pathogens; and Diabetes and Cardiovascular Disease pillars while continuing to support the substantial collaborative work that has been started in the area of Disorders of the Nervous System (Disorders of the Brain and Visual System).

REQUESTED FUNDING: $9.5M

Small Business Innovation Research Program (SBIR) Matching Grants

The federal SBIR program is the largest innovation program in the United States. SBIR offers competition-based awards to stimulate technological innovation among small private sector businesses with significant commercial applications. Many famous, high-tech firms, such as Qualcomm, first got their start via this important program.

SBIR targets the entrepreneurial sector because that is where most innovation and innovators thrive. However, the risk and expense of conducting serious R&D efforts are often beyond the means of many small businesses. SBIR award winners frequently partner with university researchers. By reserving a specific percentage of federal R&D funds for small business, SBIR enables small business to compete on the same level as larger businesses. SBIR funds critical startup and development stages and encourages the commercialization of the technology, product, or service, which, in turn, stimulates the U.S. economy.

New York State has historically underperformed in winning SBIR awards, an indication of fewer commercialization efforts statewide. By establishing matching grants, New York will make the SBIR program more enticing to entrepreneurs, thereby increasing applicants. A New York State SBIR matching grant program has the additional advantage of outsourcing the decision making to an expert peer-reviewed body.

Matching grant of 50% would be provided upon proof of successful federal award. The grant could be used for any expenditure allowed under the federal SBIR program guidelines including cost sharing, purchase of equipment, legal costs (including IP), commercialization costs (marketing, business planning, sales, etc.), or fund raising costs (venture funds or other grant preparations).

REQUESTED FUNDING: $5M

Appendix B: SUNY Commercialization & Development 2012 Program Proposals

SUNY is a major producer of intellectual capital and its entrepreneurial programs create a pathway to translate the breadth and depth of SUNY research discoveries into economic development opportunities. With government, business and industrial partners, SUNY faculty researchers advance knowledge, discovery and innovation that can translate into real solutions to today's challenges in health care, energy, manufacturing, safety, security and information technology, and have a major economic impact, creating jobs and new commercial products.

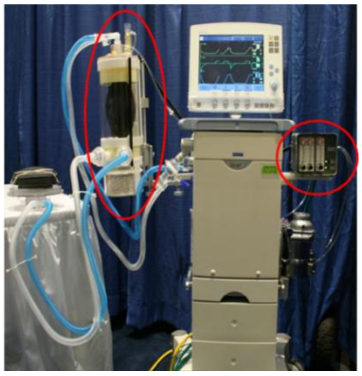
The commercialization process begins with innovations emerging from nearly $1 billion in SUNY sponsored research. However, the SUNY 'innovation engine' has not yet reached its full potential. The Research Foundation is working with SUNY on critical next steps that are required to translate its innovations from basic, lab stage research to commercial opportunities and economic impact. The proposed programs focus on the funding gap that exists after basic research funding ends and before a viable and investable company is operating, a phase so lethal to new technology that it is known as the "Valley of Death". These programs build on SUNY's commercialization efforts and are modeled after successful similar programs at peer institutions. Commercial companies and even venture capital investors are reluctant to invest in technology at this early stage, and targeted state support has proven effective in helping to bridge this gap, resulting in substantial economic impact.

FROM LAB TO….	FUNDING GAP (I.E. "VALLEY OF DEATH")				MARKETPLACE	ECONOMIC IMPACT
INNOVATION	TECHNOLOGY ACCELERATOR FUND	ENTREPRENEUR-IN-RESIDENCE	PRE-SEED FUND	STARTUP SUPPORT	BUSINESS INCUBATION	PRODUCT AND SERVICES SALES, JOB CREATION, ECONOMIC ACTIVITY

"Yet, even with historical success as a contributor to innovation and economic creation, the future ability of research universities to support this innovation is threatened, or at least constrained, by the lack of early stage capital (and support) available to transition government and industry sponsored research from the lab to the marketplace. This "gap" extends from where the government funding of basic research ends to where existing companies or investors are willing to accept the risk to commercialize the technology. The negative result is a large portion of economic creation that goes unrealized simply because it isn't funded and supported." J. Johnson, MIND THE GAP 2011, Innovosource, LLC, 2011.

SUNY Technology Accelerator Fund

FUNDS USED TO BUILD AND TEST A PROTOTYPE, CONDUCT HEAD-TO-HEAD COMPARISONS, OR ANSWER A CRITICAL VALIDATION QUESTION PRIOR TO LICENSING OR STARTUP FORMATION



A $40K award built the prototype "Universal Isolator" and led to formation of Medical Conservation Devices, LLC in Buffalo, NY.

A material barrier to the commercialization of university technology is the *lack of funding for promising technologies after sponsored support ends and before the technology is mature enough for conventional commercial investment*. Funding at this stage is essential in order to translate promising discoveries that may be groundbreaking, or have broad potential implications for the public benefit, into commercial endeavors that could have great economic impact.

When basic research funding ends, further evaluation and "proof-of-concept" is often necessary to establish that a new technology is commercially viable, to prove its value, and to reduce the risk for industry or investors. Translational projects demonstrate that a technology can be taken from lab scale to commercial scale (i.e. prototype development), prove advantages against competing technologies, or answer critical pre-clinical questions, for example. Answers to these questions help attract experienced management and investors. Negative results at this stage are also useful, helping universities to avoid costly investments in patent applications and waste of private investment on less than optimal technology.

The SUNY Technology Accelerator Fund (TAF) demonstration project initially funded five projects in June 2011, supporting new diagnostic tools, cutting edge electronic devices, and innovative technologies in the fields of nanobioscience, energy, and biotechnology. The projects awarded funds through TAF, listed below, exemplified three characteristics: disruptive technology, protectable intellectual property, and market demand. TAF plans to award additional funds in spring 2012 to two of those projects that are most likely to conclude with a license agreement to an existing industry partner or new startup, and would like to expand the program, based on the impact of similar programs in other states.

- *A Screening Test for Early Detection of Ovarian Cancer*
- *New Microphone Design to Improve Hearing Aids*
- *Targeting a Cell's RNA to Create Novel Diagnostic Tools*
- *Harvesting Vehicle Vibrations into Useable Energy*
- *New Test to Identify Birth Defect Risks and Developmental Disorders*

REQUESTED FUNDING: $1M

SUNY Entrepreneur-in-Residence Program

Entrepreneurship often starts simply – with an idea and a person who is willing to take on the initiative and risk to bring that idea to commercial fruition. But it takes much more to build and grow a successful and sustainable business enterprise. It takes vision, experience, collaboration, resources, and leadership. That is what a veteran entrepreneur in residence offers, and what new entrepreneurs need most.

A SUNY Entrepreneur in Residence (EIR) program will infuse valuable real world knowledge and expertise into SUNY's entrepreneurial environment, helping to develop and ensure the success of the next generation of startup leaders and companies. The SUNY EIR Program will leverage the nation's largest comprehensive system of public higher education to bring together the energy and talent necessary to build a strong and vibrant entrepreneurial community.

EIR programs are widely adopted today both by universities and venture capital firms as a means to bring experienced management to the challenge of commercializing a new, promising technology. Universities utilize EIRs to help select high potential startup technologies and to develop the business and company launch plan. EIRs are also used to provide entrepreneurial experience and mentoring to a first-time company founder, which increases the probability that an enterprise will be successful. Startups with inexperienced management have a much more challenging path through funding and commercialization; however, when an experienced EIR is involved, the company avoids typical pitfalls and is in a better position to attract investment.

Through the SUNY EIR program, entrepreneurs with proven subject matter expertise and management experience will work with aspiring entrepreneurs at SUNY campuses across the state to identify the best ideas and most promising business opportunities, and help map them to sources of funding and leadership talent so they may grow to full scale. The program will focus on SUNYs strengths in key research areas, such as energy and healthcare, and work in concert with other SUNY programs.

An additional enhancement to a SUNY EIR program is the integration of SUNY's management and law graduate students who will help with market research and business plan development, intellectual property strategy and corporate legal structure, thereby fostering and training a new generation of entrepreneurs.

The SUNY TAF and EIR programs are coordinated efforts. The EIR, in some cases working with the inventor and management and law students, will develop a critical proof-of-concept project plan and work to prepare a proposal for funding.

REQUESTED FUNDING: $1M

SUNY Pre-seed Fund

THE FIRST INVESTMENT IN A STARTUP IS CRITICAL TO ATTRACT A SOLID MANAGEMENT TEAM AND TO ACHIEVE EARLY MILESTONES.

SUNY maintains a sponsored research portfolio of nearly $1 billion, has been issued almost 1,000 patents, and is home to four Centers of Excellence, three Centers for Advanced Technology, and twelve small business incubators. Together these elements form SUNY's comprehensive pipeline to create and transition innovations into business opportunities through startup companies. Seed stage companies form the foundation of the innovation-based economic development value chain in New York. However, seed stage companies that are positioned for growth are critically challenged by the dearth of seed stage funding in New York, and this gap results in languishing potential to leverage the vast research and development activities across the state.

Research expenditures at New York academic institutions are approaching $5 billion, placing New York second only to California. Yet California attracts nearly three-quarters of New York City's venture investments, while New York companies receive less than 10% (Source: Venture Capital & Seed Activity in NYS, Excell Partners, 2009). When SUNY campuses prepare a startup company for funding, where do they go for pre-seed funding in the current NYS environment?

The availability of seed funds for SUNY's technology-based startups is absolutely critical to the retention of these high-growth companies in New York. With modest seed funds dedicated to SUNY startups, SUNY can achieve its strategic vision to create a true economic development value chain linking all of the players in a fast track process from concept to commercialization, resulting in job creation.

The SUNY Pre-Seed Fund will operate as a 'side-car' fund that invests alongside professional venture funds. This affords the benefit of using due diligence performed by professional co-investors and avoids costly fund management, while encouraging in-state venture investments through the opportunity for leverage. The SUNY Pre-Seed fund is the first step to develop a funding continuum consisting of early, mid- and late-stage venture investors. Later stage investors will be part of the pre-seed investment decision so they can follow companies they are interested in funding if the necessary milestones are met along the way.

REQUESTED FUNDING: $5M

Supporting SUNY Startup Companies

SUNY Patent Pool - Broadening SUNY's Patent Strategy

Generally startup companies are cash poor when they request a license from SUNY commercialization offices and do not have the funds available to reimburse patent costs. This prevents SUNY from employing a broad patent filing strategy to leverage market opportunity worldwide. When a narrow patent filing strategy is adopted, patents are filed in fewer jurisdictions, causing SUNY intellectual property to be protected in fewer markets. This creates a pipeline that is less desirable to licensees because it opens the door for possible competition in those markets and reduced market share.

When compared with institutions of similar composition and research expenditures, most SUNY campuses spend a fraction of the patent fees of their non-SUNY peers. For example, during fiscal year 2010 the University at Buffalo spent $4,721 on legal fees per new technology disclosure. This is nearly $11,000 less than its median peer institution. The difference is attributable to the University at Buffalo filing fewer patent applications in fewer territories.

Providing SUNY's regional commercialization hubs with an additional funding mechanism that recovers SUNY's investments in intellectual property protection when SUNY licenses to New York -based startups will incentivize entrepreneurs to create companies around SUNY technologies and locate in New York. The company can devote its precious early resources to bringing a product to market, and SUNY recovers its patent investment so that it can re-invest in the next generation of technology.

Requested Funding: $750K

SUNY Facilities Access: Leveraging SUNY labs, equipment, and expertise

The majority of licensed SUNY technologies need continued development in order to be made into a product or service for public consumption. SUNY can ensure that those development dollars stay in New York through programs that leverage use of its facilities and equipment in consideration for equity in New York-based startup companies that license SUNY technology.

Companies often apply for access to university facilities to perform development work; working side-by-side with SUNY researchers to solve practical barriers to commercialization. However, SUNY must recover the costs associated with the company's use of its facilities, and research and development dollars are scarce. A modest fund to seed an equity-based facilities access program will allow SUNY to open its doors and meet the research and development needs of New York-based startups. SUNY can accept an equity position valued at the cash equivalent of its cost to provide access to a given facility or equipment. Program funds will be used to offset overhead costs as equity holdings mature and eventually are liquidated to replenish the fund.

R&D assistance is a major incentive to entrepreneurs to create companies around SUNY technology and locate in New York to gain access SUNY's state-of-the art facilities and

equipment. With his program, SUNY can make New York a more attractive entrepreneurial environment and retain high growth companies.

REQUESTED FUNDING: $750K

SUNY Regional Technology Business Service Centers

University research and small to medium-sized businesses are often the catalyst for new ideas, processes and products. These changes can yield significant innovations or 'game changing' discoveries that lead to entirely new economic sectors. Researchers are highly knowledgeable in the scientific or technological aspect of their innovations, but generally are not experienced in business creation or growth. Writing a business plan, marketing to venture capitalists, and recruiting management requires distinct and specialized skills. The creation of Regional Technology Business Service Centers that provide one-stop access to business mentoring, capital, incubator space and other critical resources will join faculty and entrepreneurs with the resources they need to start and grow small businesses.

SUNY's Regional Technology Business Service Centers will perform preliminary business evaluations and connect entrepreneurs with appropriate stages and sources of development funding including angel networks, regional industrial development authorities, SBIR/STTR funds, SBA loans, revolving loan funds, venture capitalist and commercial banks. Graduate students in business, law, health, engineering and other relevant fields, supervised by faculty, can assist in providing consulting services for academic credit, thereby enhancing their own learning experience and exposing them to the realities of entrepreneurial activity.

The New York State Small Business Development Center network provides an ideal foundation for the creation of Regional Technology Business Service Centers. SBDCs are already located on campuses throughout the state, supported by a central resource center in Albany. Their systems and methods are well established and driven by performance metrics. Last year SBDCs assisted 588 technology firms, leveraging $108M in technology-based economic impact. In addition, the SBDC network has received a U.S. Federal and State Technology Partnership (FAST) assistance program grant to help New York firms better compete for SBIR awards as well as Small Business Technology Transfer (STTR) commercialization phase awards to leverage State and private sector contributions.

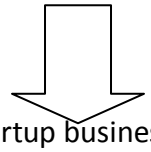
The SBDCs will partner with SUNY technology transfer offices, incubators, Centers of Excellence, and Centers of Advanced Technology; which provide and broker multiple forms of entrepreneurial assistance. Relationships with State agencies (e.g., ESD, NYSERDA) and local private funding entities also are critical to this effort. Resources to augment staff and space, conduct events and provide mentoring specifically geared to technology-based companies will enable the SBDC network to play a significant role in research-supported economic growth throughout the State.

REQUESTED FUNDING: $2.5M

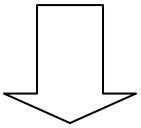
Summary

The SUNY TAF, EIR, Pre-seed, Patent Pool, Facilities Access, and Regional Technology Business Service Center programs all work together to nurture formation and retention of New York-based companies. An independent study of similar programs in Ohio found a 10 to 1 return on every dollar of the state's investment. ("Making an Impact- Assessing the Benefit of Ohio's Investment in Technology-Based Economic Development", www.development.ohio.gov/ohio third frontier/documents/recent publications/OH_Impact_Rep_SRI_Final.pdf (Sept 2009), p.3)

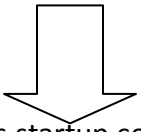
- **SUNY TAF** helps SUNY mature technologies for commercialization, guided in some cases by input from the EIR.



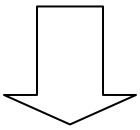
- **SUNY EIR** helps prepare a startup business plan or supports the formation of a startup management team to better prepare them for funding.



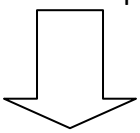
- The **SUNY Pre-seed Program** provides the initial funding to secure the management team and complete the critical early milestones.



- The **SUNY Patent Pool** allows startup companies to devote scarce early dollars to research and development efforts to meet their milestones without sacrificing patent coverage.



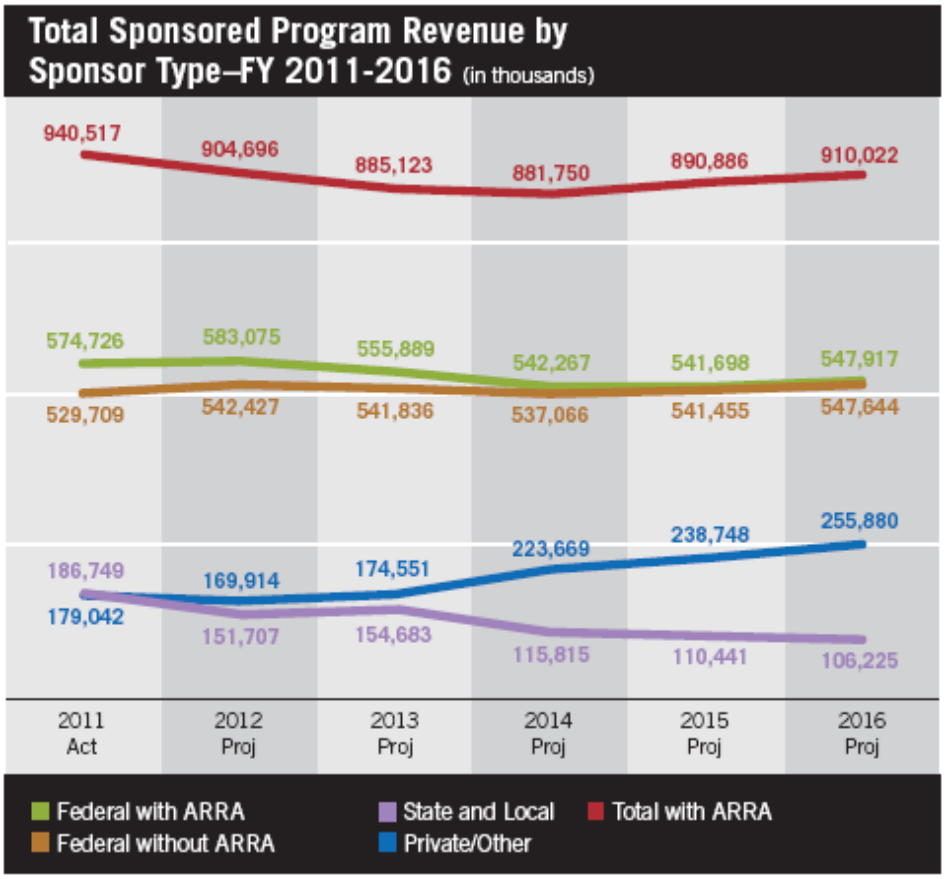
- The **SUNY Startup Facilities Access Program** gives startup companies access to SUNY facilities, equipment and intellectual capital in exchange for equity.



- The **SUNY Regional Technology Business Service Centers** provide entrepreneurial assistance to tech-based companies.

Companies nurtured through the SUNY process are significantly better positioned for growth and sustainability than those which brave the investment environment unsupported by a strategic public partner. These companies are better positioned for follow on funding from angel and seed stage investors and will lead to more effective translation of SUNY innovations into company formation, job creation and economic impact in New York.

Appendix C: Total Sponsored Program Funds by Sponsor Type FY2011 - 2016



Sponsor Type	Act 2011	Proj 2012	Proj 2013	Proj 2014	Proj 2015	Proj 2016
Federal with ARRA	574,726	583,075	555,889	542,267	541,698	547,917
Federal without ARRA	529,709	542,427	541,836	537,066	541,455	547,664
State and Local	186,749	151,707	154,683	115,815	110,441	106,225
Private/Other	179,042	169,914	174,551	223,669	238,748	255,880
Total	940,517	904,696	885,123	881,750	890,886	910,022