

**STRATEGIC INVESTMENT FUND
PROJECT BUSINESS PLAN**

PROJECT NAME:

ResearchUVA: A platform for advancing UVA research capacity and competitiveness

PROJECTED BEGIN AND END DATES:

7/1/16-6/30/19

EXECUTIVE SUMMARY:

Research, or the generation and dissemination of new knowledge, is a major activity at the University of Virginia; it is an engine that draws extramural funding, attracts talented faculty, students and staff, drives the creation of brilliant and inspiring scholarly work and curricula, spurs economic development and generates prestige. The development and submission of proposals to extramural entities to fund research is thus a major business function within the University. On behalf of hundreds of researchers in a variety of disciplines across Grounds, the University's Office of Sponsored Programs (OSP) submits thousands of proposals per year, with a value now over a billion dollars annually. While the U.S. government is the University's largest sponsor of research, over the next several years, federal research expenditures are projected to remain flat. The funding environment will become only more crowded and hypercompetitive, locally and globally. The University must be positioned to compete intensely and compete successfully in this environment. However, unlike its peers in the Commonwealth and across the country, the University has no enterprise-level system to support proposal development and submission. This results in significant and even prohibitive inefficiencies and administrative burden (as well as increased compliance risk) associated with proposal activity for the individuals and offices supporting research on Grounds--at the central, school, department and center levels. Relatedly, the University cannot reliably track or report on proposal activity--an important leading indicator of research activity--to internal or external stakeholders. This is particularly disadvantaging from the perspectives of benchmarking, understanding proposal success rates, identifying the areas of the University in which interdisciplinary teams are forming, and taking advantage of other research analytic/intelligence measures that could positively influence institutional decisionmaking.

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PROJECT MANAGERS' NAMES & TITLES:

Elizabeth Adams, Assistant Vice President for Research Administration, Office of Sponsored Programs; Vonda Durrer, Senior Director of Electronic Research Administration, Office of Sponsored Programs

KEY STAKEHOLDERS:

Tenure and tenure-track faculty; graduate students; postdocs; undergraduate students; senior management of the University, including the Vice President for Finance and the Senior Vice Provost for Research; research faculty; Licensing & Ventures Group (LVG); Commonwealth of Virginia.

PROJECT DESCRIPTION:

ResearchUVA is an internally-conceived and developed enterprise-wide system, just over a year old, originally designed to provide faculty around-the-clock access to critical financial information associated with their sponsored projects. Over the last several months, the system's function has been enhanced to provide faculty and administrators access to original award and agreement documentation (in PDF format). These enhancements have increased transparency and efficiency, and reduced University-wide costs associated with producing and maintaining redundant paper files. Another major function of ResearchUVA is the electronic tracking of proposal and award-related transactions within the Office of Sponsored Programs (OSP) and schools. This feature, rolled out in February/March 2016, supports optimal triaging and cross-team collaboration on these transactions, including providing faculty and administrators real-time access to their status. Increasingly, ResearchUVA appears to offer an ideal platform on which to build a "pre-award" (proposal development and submission) enterprise system at UVA, from the perspectives of capitalizing on an existing and well-received investment at the University, delivering a high-quality solution to the research community as soon as possible, and providing cost effectiveness relative to the marketplace. In partnership with UVA's Custom Applications and Consulting Services (CACS), OSP is currently seeking to strengthen this business case and planning/design for ResearchUVA through an effort to evaluate it relative to other "homegrown" systems at peer institutions as well as commercial/vendor-supplied options and modules. Over the last six months, OSP, CACS and key school representatives conducted very successful site visits to Virginia Tech and Duke University to investigate their homegrown pre-award systems.

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PROJECT OBJECTIVES:

Goals:

The University is currently significantly investing in research via its early-stage implementation of the Cornerstone Plan, as well as its pursuit of a recently-established goal to grow its sponsored programs base from approximately \$300 million to \$500 million within the next five to ten years. However, to be effective, these efforts must include a substantial investment in research-related infrastructure. In modern organizations, infrastructure increasingly refers to systems. The University must ensure now and moving forward that infrastructure limitations do not unreasonably prevent it from maintaining and increasing its sponsored programs base. This submission proposes increased investment in a key institutional system supporting research—ResearchUVA—that will have significant strategic and tactical value to the University. This existing investment has already yielded significant returns in the form of increased productivity, transparency and cost savings. Specifically, this Strategic Investment Fund proposal advocates for the development of a functionality supporting proposal development and submission--or “pre-award” activity--within ResearchUVA.

Milestones:

Capability to report on the number and dollar value of proposals submitted per month and per year at UVA; capability to report on proposals representing interdisciplinary research; redevelopment of the ResearchUVA security model, to optimize support and "crediting" of interdisciplinary collaboration as well as to enable individual-level access to appropriate proposal and award information for all users; purchase and rollout of a connective platform (such as UserVoice) to support the collection, evaluation and resolution of user feedback on ResearchUVA; purchase and rollout of a connective platform (such as Juice) to support research "dashboards" or data analytics/visualization in ResearchUVA; capability to search on any keyword (via optical character recognition or OCR technology) across all proposal and award documents to enhance faculty searches for collaborators and manage contract compliance; capability for users to develop proposal budgets in ResearchUVA and submit proposals "system-to-system" (via an HTML feed) to the federal government, optimizing efficiency and compliance; capability for users to internally route action requests to OSP electronically, including revised budgeting, issuance of an outgoing subcontract, etc.; capability to document, route and track nonfunded or zero-dollar value agreements such as materials transfer agreements (MTAs), non-disclosure agreements (NDAs), data use agreements (DUAs), memoranda of understanding (MOUs); capability to have automated testing strategy and implementation; development of a training instance of ResearchUVA; integration with University Records Management Application (URMA).

Measurable Outcomes:

Ability to report on proposal development and submission data (including "hit rates"); ability to report on interdisciplinary proposal development, submission and awards; ability to report on operational metrics such as transaction turnaround times in OSP; increased number and dollar value of proposals submitted by the University per year; increased number and dollar value of awards received by the University per year; increased interdisciplinary proposals and awards; user satisfaction with ResearchUVA system (via survey); reduced administrative burden on faculty and staff in both preaward and postaward stages; fewer proposals returned without review due to manual errors and/or noncompliance with terms in solicitations.

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RISK MANAGEMENT PLAN

Key Success Factors:

Ability to double project team (principally to add skilled programmers) over the next two years so as to rapidly develop and deliver pre-award enterprise system (and reduce dependence on nearly 20 year old, outdated legacy database for tracking proposal and award activity); use of Agile software development processes within project team and user base to co-create the platform; buy-in of the research-intensive schools and non-research intensive schools in using the platform; ability of ResearchUVA to support large-scale, multimillion-dollar interdisciplinary proposals; development of appropriate data definitions so as to redevelop standard research administration operating procedures and ensure reliable reporting within ResearchUVA; development of institutional policies and procedures to support interdisciplinary research, including those that define and allocate academic and financial "credit" to researchers; ability of ResearchUVA generally to facilitate the administration of clinical research and clinical trials; ability of ResearchUVA to interface with other systems and datasets supporting research and sponsored activity at the University.

Risks to Project Success:

Developing ResearchUVA too slowly given significant current operational and reporting needs; connectivity with Oracle/quality and limitations of Oracle data; historical UVA proposal data incomplete and inaccurate, limiting reporting that would be available in the shorter term on multiyear/retrospective proposal activity trends; dual users/audiences of faculty and staff, which may desire different interfaces/presentation of data in the system or prioritization of activities on the project; also, to make the most of the ResearchUVA software and current institutional climate encouraging interdisciplinary research, how can we ensure that collaborations between investigators thrive within a University budget model that incentivizes maximum cost recovery by units and schools?

Risk Mitigation Strategies:

OSP participation in the development of institutional policies and procedures supporting interdisciplinary research; ensuring that communication and training facets to the project are added/developed, which will appropriately engage the dual sets of users (faculty and staff) across Grounds; development of strong working partnerships with schools to help ensure the adoption of the ResearchUVA software from a change management perspective; appropriate governance of the project (via an advisory committee?) to assist in prioritization and decisionmaking.

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FUNDING REQUEST:

Total Amount:

\$2,952,724

Granted In Increments Over What Period:

\$611,550 in FY17; \$1,150,454 in FY18; \$1,190,720 in FY19

FINANCIAL PLAN:

(Please Attach the Following, as applicable)

Cash Flow Forecast

- Show inflows and outflows
- Self-sustainability and potential pay back

Performance Metrics

- Include qualitative and quantitative metrics
- Quantitative may include ROI or break-even analysis
- Describe the events that would activate an exit strategy
- Describe the plan for exiting the investment

SUBMITTED BY:

Name: Elizabeth Adams

Date: Jun 8, 2016

Cash Flow Statement ResearchUVA

Updated

6/9/2016

Description	OneTime/Ongoing	FY17	FY18	FY19	FY20	FY21	Assumption
Uses							
<u>CACS Development Cost</u>							
Development Cost	3-years	\$877,500	\$908,213	\$940,000			3.5% inflation rate
Infrastructure Cost	Ongoing	\$83,000	\$85,905	\$88,912			3.5% inflation rate
Software licensing and maintenance	Ongoing after initial integration w/RUVA	\$50,000	\$51,750	\$53,561			3.5% inflation rate
Contingency		\$101,050	\$104,587	\$108,247			
Sub-total USES		\$1,111,550	\$1,150,454	\$1,190,720			
Sources							
Reserves		\$500,000					
TOTAL SIF Request		\$611,550	\$1,150,454	\$1,190,720			
				Total		\$2,952,724	

At the conclusion of SIF funding, ResearchUVA costs would be assumed by the yearly OSP operating budget.

**UVA Strategic Investment Fund
Proposal Addendum**

This addendum is intended to confirm the requestor's commitment to project metrics and to a plan for sustainability beyond the term of Strategic Investment Fund support.

Proposal: 42

Title: ResearchUVA

Metrics:

As noted in proposal (Milestones), with these additional metrics:

Measurable Outcomes after 1 Year:

Q1 FY17

1. Proposal Routing Form (PRF; previously "Goldenrod") redesign and data capture
 - a. Capability to report on the number and dollar value of proposals submitted per month and per year at UVA
2. Capability to document, route and track nonfunded agreements (NFAs) or zero-dollar value agreements such as materials transfer agreements (MTAs), non-disclosure agreements (NDAs), data use agreements (DUAs), memoranda of understanding (MOUs)
3. Begin establishment/redevelopment of standard operating procedures (SOPs) governing major transaction types in ResearchUVA

Q2 FY17

1. Proposal Routing Form (PRF; previously "Goldenrod") data capture
 - a. Capability to report on proposals representing interdisciplinary research
 - b. Capability to report on investigator effort committed at the proposal stage
2. Establish overall project communication strategy and resources
3. Establish overall project training strategy and resources
4. Complete establishment/redevelopment of standard operating procedures governing major transaction types in ResearchUVA
5. Develop capability to validate data between ResearchUVA and Oracle
6. Begin modifications to ResearchUVA for accessibility

Q3 FY17

1. Begin redevelopment of the ResearchUVA security model, to optimize support and "crediting" of interdisciplinary collaboration as well as to enable individual-level access to appropriate proposal and award information for all users
2. Purchase and rollout of a connective platform (such as UserVoice) to support the collection, evaluation and resolution of user feedback on ResearchUVA

3. Purchase and rollout of a connective platform (such as Juice; <http://www.juiceanalytics.com/>) to support research "dashboards" or data analytics/visualization in ResearchUVA
4. Capability to have automated testing strategy and implementation

Q4 FY17

1. Capability to search on any keyword (via optical character recognition or OCR technology) across all proposal and award documents to enhance faculty searches for collaborators and manage contract compliance
2. Development of a training instance of ResearchUVA
3. Validation strategies implemented on all data in ResearchUVA
4. Complete integration with Clinical Research Improvement in Systems and Processes (CRISP); <https://cr.med.virginia.edu/>
5. Evaluate integration with other UVA systems/business functions such as COI, ACUC, IRB, etc.; develop request for information as appropriate for vendor-supplied solutions
6. Complete modifications to ResearchUVA for accessibility
7. Complete redevelopment of the ResearchUVA security model, to optimize support and "crediting" of interdisciplinary collaboration as well as to enable individual-level access to appropriate proposal and award information for all users

See charts on next page that illustrate Year 1 vs. out year deliverables for ResearchUVA.

Plan for sustainable funding beyond SIF investment:

As noted in proposal Cash Flow Statement, the costs for developing functionality for pre-award activity within ResearchUVA will be expended over a three-year period. Ongoing costs for software licensing and infrastructure will be covered by the yearly OSP operating budget.

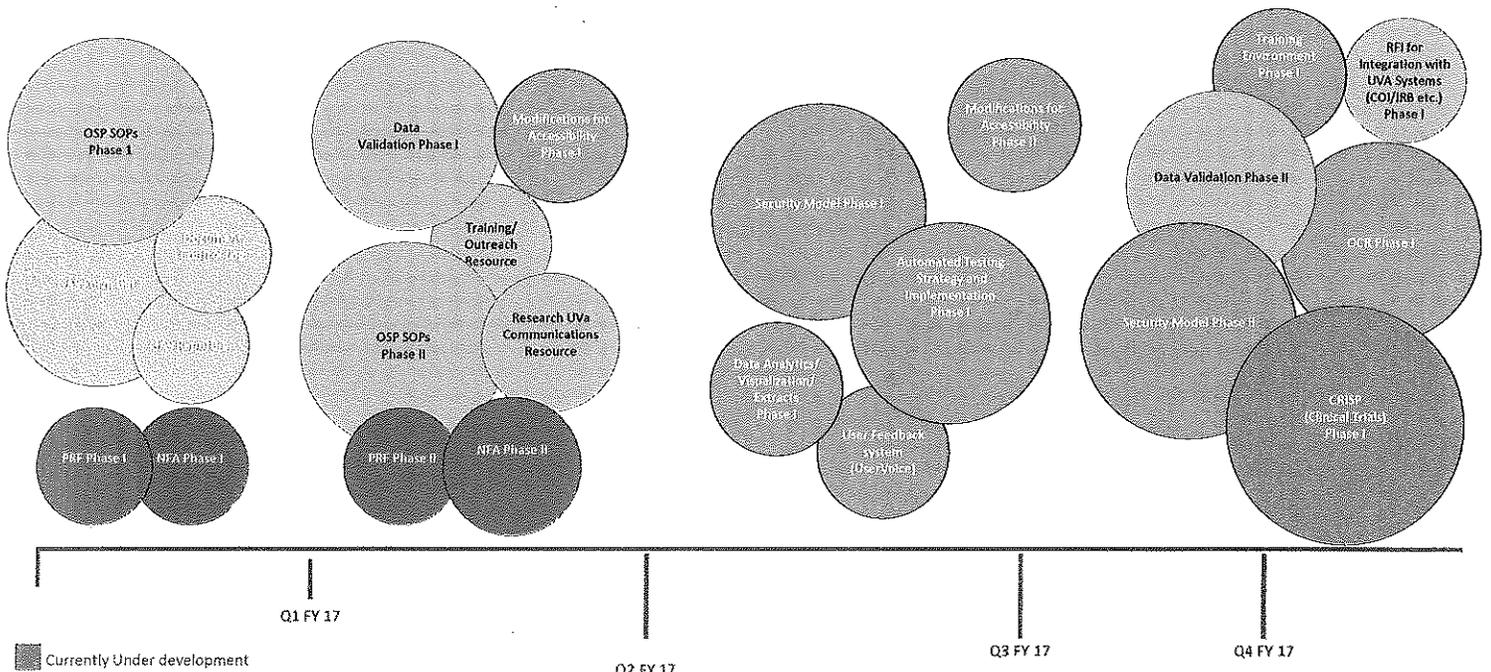
Signed



(Dean or VP)

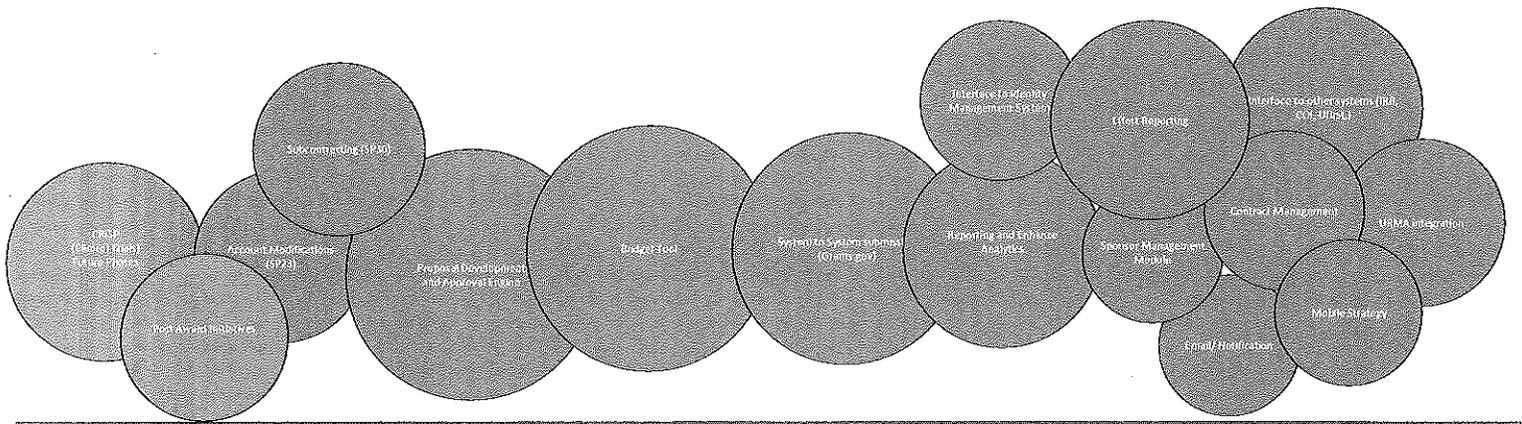
9/7/12

(Date)



- Currently Under development
- Partially Scoped/Pending Development
- Needs discovery and scoping
- Parallel OSP/OE Initiative
- Complete, deployed into production

SIF - Research UVa Development Roadmap



FY 18 and beyond

- Partially Scoped/Pending Development
- Needs discovery and scoping

SIF - Research UVa Development Roadmap