The Research Administration Improvement & Systems Enhancement (RAISE) Project

Interim Report
October 24, 2012

EXECUTIVE SUMMARY

Context

The U of T is focussed on the attainable goal of consistently ranking among the top ten public universities in the world. Currently, **~3900 U of T researchers** generate ~**3500 applications** annually to over **600 unique sponsors** and receive approximately **~$400M in annual research funding**. World class researchers need and deserve world class administrative support.

Purposes

RAISE was created to establish the U of T as Canada's leading institution in research administration through the development of state-of-the-art tools and processes that ensure the effective, efficient, complete, accurate and transparent management of research activities, harmonized across central service units and partner offices in the academic divisions.

Approach

RAISE has employed a systematic approach to address this challenge. An analysis was conducted to identify target areas for improvement. Individual sub-projects were then identified and prioritized based on availability of resources, urgency, impact and developmental dependencies. At the sub-project level, further analysis of current processes was undertaken, best practices were identified and, wherever possible, automated through new electronic tools to ensure consistency of approach, maximum efficiency and transparency. Throughout the solution design process, relevant stakeholders were consulted for their feedback.

Impact

RAISE sub-projects will generate significant financial and environmental savings for the University. In addition, RAISE has already made substantial improvements in our ability to fulfill our obligations under the Tri-Council MOU to monitor adherence to protocol requirements thereby protecting the University's greatest single research income source.

Among its key accomplishments, RAISE has greatly improved revenue management by enabling the clean-up of a considerable backlog in un-reconciled accounts and ensuring that the problem will not recur in future. It has also enabled the timely and accurate collection and distribution of indirect cost revenue, as well as the identification of an additional $5M in previously undistributed indirect cost revenues. The ongoing impact of RAISE will be evident as repetitive mechanical tasks are automated, freeing human resources for higher value activities.

Next Steps

RAISE "Phase 1" is drawing to a close, having addressed a significant number of gaps in our institutional capacity to steward externally supported research resources (see Appendix B). However, much remains to be done. Renewal funding for Phase 2 will enable the completion of some of the outstanding, including large, sub-projects, after which it will be possible to incorporate ongoing continuous improvement and related automation into our regular course of business, ensuring an administrative and systems environment worthy of our researchers.

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OVERVIEW OF PURPOSE AND PRINCIPLES

The RAISE project has been governed by the need for improved risk management practices at the University brought about by ever increasing levels of accountability demanded by an expanding pool of sponsors. Simultaneously there is the overwhelming need to reduce clerical administrative demands on faculty, academic administrators and staff. These twin objectives will facilitate increased research activity at the University by allowing faculty and staff to focus their attention on higher order tasks.

More specifically, RAISE tackles issues of transparency, auditability, compliance, accuracy, timeliness, and increased efficiency.

- Transparency and auditability go hand in hand. By moving processes online, RAISE will create clear and transparent audit trails for research administration processes.

- Compliance will be enhanced through embedded systems' rules, thereby removing the ability to circumvent compliance issues, with a consequent reduction in risk of suspension of Tri-Council funding.

- By automating processes RAISE codifies best practices, reduces the likelihood of human error, and improves the time to completion of tasks.

- RAISE will have a major impact on the University's faculty providing them with timely reminders of imminent deadlines as well as greatly reducing the time they spend running paper around the campus for signatures.

> *"The RAISE Project's interim accomplishments have already served to mitigate a number of reputational, operational and financial risks associated with research administration in our decentralized environment. These accomplishments together with the Project's drive to increasing automation of manual processes, oversight and application and protocol approvals will further enhance the efficiency and effectiveness of the administration throughout the University and provide our funding partners with assurance about compliance with their requirements."*
>
> Mark Britt
> Director,
> Internal Audit Department

RAISE is addressing these challenges by:

- thoroughly analyzing current practices in administration of research

- turning undocumented processes into optimized standard processes

- providing information to end users in easily digestible formats

- providing robust audit trails and reporting to facilitate corrective action and to focus educational activities

- providing tools to process and manage tasks directly rather than through an intermediary

- leveraging existing resources in SAP

Automation of time consuming, repetitive tasks will ensure consistency of approach and the elimination of errors caused by manual intervention. It will improve timeliness of action as many actions will be triggered by previously recorded actions within the system.

a) ENVIRONMENT – PRE-RAISE:

- Administrative tasks associated with research are conducted by PIs, students, academic administrators and staff with varying degrees of oversight. Furthermore, the roles and responsibilities of everyone involved with the research activity are at times misunderstood, the division of responsibilities varies from unit to unit (in some cases from project to project) and the persons carrying out specific tasks within a unit are not always easily identifiable.

- Transaction processing functions are decentralized and performed by administrators with varying degrees of (a) familiarity with the research activities undertaken, (b) accuracy, and (c) competency, all of which may be caused by fiscal resource constraints, hiring and positioning of personnel unsuitable to administer, administrator turnover, optional training (which is poorly attended), infrequency of process performance with consequent knowledge loss, and, in some cases, risk of retaliation.

- There are very few detective controls performed due to fiscal resource constraints at all levels of the University and the absence of easily manipulated tools with which problems could be identified. This shortcoming is evident across the entire range of administrative research tasks, whether it is incorrect data entry on financial transactions or the monitoring of submission of research reports and other deliverables.

RESULTING ISSUES:

- There are resource capacity issues such as (a) capacity consumed by manually executing routine activities; or (b) capacity not available to perform cumbersome detective controls.

- There are breaches of third party agreements due to (a) delinquency in reporting, (b) partaking in non-compliant activities; or (c) inaccurate financial reporting arising from ineligible expenditures.

- There are unrecognized operational losses arising from deficits in research funds.

- There are unspent research funds (surplus) sitting unidentified and unused.

- There is limited transparency or confusing data exposing the University to unforeseen and therefore difficult to manage risks.

b) RAISE STRATEGY AND APPROACH

- Prior to any development, the RAISE team will analyze errors, and risk factors associated with research administration in order to thoroughly understand the business processes and circumstances contributing to the errors or risks.

- Where appropriate, the team will consult widely with stakeholders throughout the solution design process.

- The analysis and consultation will result in the automation of routine transactions to the extent possible as a means to (a) increase resource capacity (by reducing manual work load) and redeploying resources to more "value-add" tasks of review and monitoring (b) record financial data and information more quickly, (c) input data accurately by reducing potential for errors from manual intervention.

- RAISE will enhance/correct existing reports or screens, and design new reports to replace more time consuming manual reviews and other monitoring controls.

- Key to the long term success of RAISE will be the design and implementation of automated preventive controls through IT since such controls are, over the long term, less expensive and in the current environment, more reliable than manual or human based detective controls.

- To ensure the maximum return on the RAISE over the long term, the team will develop a variety of training tools for use during implementation and for inclusion into the ongoing institutional training curriculum.

> *"In a large, highly complex and decentralised research funding environment mitigating risk and delineating accountability are significant challenges. Project RAISE has met these challenges by identifying and filling gaps in existing business processes and by innovatively deploying existing University enterprise system (AMS) resources. New research reports, and collaborative engagement have facilitated increased transparency in research fund accounting, eliminating or significantly reducing long-standing problems such as overdrawn accounts and facilitating the accurate and timely distribution of research overhead."*
>
> Horatio Bot
> Director of Financial Services
> Faculty of Arts & Science

c) ENVIRONMENT – POST RAISE IMPLEMENTATION

In addressing the issues and implementing the solutions identified above, RAISE acknowledges that the variability of approaches inherent in the management of research within the University context is unlikely to change. This variability of approach is both a strength and a challenge; it allows researchers to craft creative, flexible responses to a dynamic research environment suitable to the context in which the research takes place, but the same variability makes it difficult to establish routines to manage the risks to the University.

The solutions under development in RAISE will allow faculty to pursue their research objectives with a minimum of constraint while providing academic administrators and staff a more robust set of framework tools to mitigate the risks associated with the University's research enterprise.

At this juncture some of the issues identified above have already been addressed (these are outlined in greater detail later in this report). Upon completion of the current slate of RAISE initiatives the University will have made great strides in achieving its twin objectives of risk management and reduction in clerical paperwork. However, there remain additional opportunities for increased efficiencies, cost containment and risk management enabled by technological enhancements.

RAISE SUCCESSES

As already stated, the objectives of the RAISE initiatives include risk management; improved accuracy, completeness and timeliness of transactions; and greater transparency, auditability, and efficiency in processes while reducing clerical paperwork through the automation of routine tasks. A full, detailed listing of all RAISE initiatives completed to date (or nearing deployment) can be found in the attached Appendix B.

a) RISK MANAGEMENT / COMPLIANCE TO THIRD PARTY AGREEMENTS

- Automation of human and animal ethics protocol email correspondence (including expiry reminders)

  Over one thousand emails are now sent automatically per month (to over 1500 recipients, as students and other contacts are now being copied on the notifications).

- Redirecting payroll postings away from closed/frozen restricted research funds

  Payroll postings are no longer pushing through to expired funds or piercing spending blocks placed when ethics protocol approval is pending or has lapsed.

These notices and automated preventive controls reduce the risk of researchers participating in non-compliant activities. This was a particular concern of the Tri-Council monitoring visit report. Implementation of this control greatly reduces the risk of suspension of the University's funding by the Tri-Councils.

b) ACCURACY / COMPLETENESS / TIMELINESS OF FINANCIAL TRANSACTIONS

- Monitoring controls and automation of close-out activities in a restricted research fund

  New tools (detailed monitoring report) and training enable Divisions to take timely corrective action on deficits or other problems. The first part of the close-out process – adjust deficits – has been automated and will reduce the risk of negative financial exposure for the institution.

- Automation of indirect cost revenues (IDC) calculation and posting

"The automation (achieved and planned) of many of the research reporting functions is one of the best things that has happened at U of T in some time. Systems work best when information is delivered in a consistent, predictable and transparent manner to all the stakeholders. It has been of great benefit at the divisional level to have the reporting capabilities to track the collection of research overhead (which has significant financial implications at budget time for our departments) and to monitor potential deficit problems as grants draw to a close. I hope RAISE is able to continue and build upon the good work that has already been accomplished".

Linda Leslie
Finance Officer
Faculty of Applied Science &
Engineering

Each month, the detailed IDC calculation rules now maintained in every restricted research fund are used to auto-calculate and auto-post approximately $1M in IDC ($12M annually). In preparation for the cut over to the automated postings, a rigorous IDC posting "catch up" exercise was done using the new tools which uncovered and booked approximately $5M dollars in missed or late IDC postings.

- Automation of revenue postings

    Programs were developed to allow mass uploading of sponsor payments by research accountants into their respective individual restricted research fund. Previously, due to resource constraints and the large volume of payments, the total revenues for NSERC and CIHR awards were posted to a central fund. Revenues are now posted automatically to the specific individual award funds where the corresponding budget and expenses are recorded. Divisional users now have access to more complete and accurate information on the financial status of their accounts. With this greater transparency, the risk of deficits is reduced.

These automated processes also increase resource capacity by automating routine tasks.

c) TRANSPARENCY / AUDITABILITY / EFFICIENCY

The three large projects currently in the pipeline, (research application submission, human protocol submission and review, animal protocol submission and review), will take the rather opaque processes surrounding these procedures and make them transparent and auditable. The automation of these processes will also increase efficiencies as core and ancillary manual processes are eliminated, (e.g. filing of paper copies).

d) ACCOUNTABILITY

As noted above, an ever increasing demand for "accountability' is one of the RAISE drivers. These demands pose financial and reputational risks for the University flowing from our relationships with funders directly, but also with the general public whose support is crucial to maintaining the approximately *80% of research funding received by the University from various levels of government.*

More specifically these risks are embodied in various pieces of legislation, the Tri-Council MOU to which the University is a signatory, increased vigilance by the U.S. federal government as seen in the recent NIH site visit and pending A-133 compliance audit, and individual research funding agreements themselves.

Consequences of non-compliance can vary from individual to across the board suspension of funding, repayment demands, loss of eligibility for the individual or the University as a whole and, with

"The new AMS reports available to our business officers as a result of RAISE make it easier to monitor and reconcile activity in restricted research funds. This increased transparency helps divisions to prevent, identify and resolve errors, improving efficiency and accountability."

Tim Neff
Chief Administrative Officer
&
Nancy Edwards
Comptroller & Chief Financial Officer

Faculty of Medicine

the private sector in particular, the potential to "poison the well" whereby a bad experience with one project makes it difficult for any other U of T researcher to work with the company.

In order to reduce the likelihood of such events, the RAISE project is building controls which will allow academic and staff supervisors to take pre-emptive action. One such example, already put in place by RAISE, is the substantial improvement in the University's ability to manage the relationship between protocols and funded research activities. This was a key demand of the most recent Tri-Council monitoring visit (further enhancements to this functionality form part of the Human and Animal Ethics Submission and Review systems currently under development). By automating protocol expiry reminder emails, RAISE has produced a two pronged benefit: it enables the University to identify before the fact, those funds which it will be obligated to suspend due to a lapse in protocol, and simultaneously greatly reduces the risk that this will happen as PIs have been forewarned of the consequences of a lapse.

In addition to improving existing practices, RAISE will continue to introduce functionality to permit the University to carry out tasks which were always needed, but could not be accomplished due to the lack of suitable tools, or prohibitive human resource demands in the absence of a suitable tool. One such example is the calendaring functionality slated for development later this year. This tool will greatly improve the University's ability to monitor the production of financial deliverables (reports, expenditure forecasts, etc.) and PI deliverables, (research reports, milestone reports, etc.). While the need for this monitoring ability has always existed, it has acquired a high level of urgency with the recent changes to the manner in which the Province disperses its research funding.

SAVINGS AND IMPACT

The second driver behind RAISE is the need to make repetitive administrative tasks easier and less time consuming so that faculty and staff may redirect their energy to more productive tasks. The total impact and savings associated with RAISE projects is difficult to quantify, as the savings and impact cascade and grow as different components of the RAISE program are implemented. Outlined below, however, are **some specific examples of the impact of RAISE**.

An enormous amount of (primarily faculty) time is currently consumed gathering internal approval signatures on research applications. Certainly these approvals are required, however, it is obvious that the current paper based approval processes squander huge amounts of the University's most valuable resource: the time of its faculty members and academic administrators. RAISE will greatly alleviate this problem through the **online submission and review of research applications**.

> *"The automated research application initiative holds great promise for more efficient use of researcher time, better management information for academic administrators, and a significant reduction in paper. We look forward to piloting this initiative at UTSC."*
>
> Malcolm Campbell
> Professor & Vice-Principal, Research
> UTSC

The University generates approximately 3500 research applications per annum. Using conservative estimates for time needed to gather approval signatures on research application submission*s*, the implementation of the RIS Application Approval System will collectively *save faculty members and/or their graduate students/assistants approximately 6000 hours annually*. To ascribe a dollar figure to this time, a rough estimate can be garnered by assigning an average salary of $100,000 to this aggregate group for an annual savings of roughly $300,000. This is simply the cost on the faculty side of the equation, it does not account for the approximately 20 weeks a year spent by VPRI staff re-keying data (with the attendant errors inherent in this process). Equally real, but much harder to quantify, are the time savings associated with copying, filing, retrieving and purging files.

Similar projections for savings can also be made for **automating the review and approval of roughly 4100 Human and Animal protocol submissions** processed by the University every year.

Looked at from a slightly different perspective, these three RAISE projects will also have a positive environmental impact. It has been estimated that approximately *280,000 pieces of paper with a total weight of 5,600 pounds, or 2.8 tons*, are consumed annually in submitting research proposals and protocols, almost all of which can be eliminated with RAISE.

By automating procedures, RAISE also allows the University to act in a more timely fashion. The **automatic close out of accounts**, the various steps of which are currently being implemented, identifies on an ongoing basis losses and surpluses in research accounts. This provides greater budgetary certainty for academic administrators and allows them to take corrective action where warranted.

The automatic posting of indirect cost revenues, which RAISE has implemented, has also contributed to greater budgetary certainty for academic administrators. The significant improvement in the accuracy and completeness of indirect cost recoveries enabled by RAISE allows the University to distribute approximately $1M in indirect cost revenues per month, thereby eliminating the surprise, either pleasant or not, inherent in a once yearly distribution.

Other RAISE projects, such as the **automatic upload of competition results**, will, in addition to speeding up the process of new FReD creation, allow the University to deliver services which it has been unable to deliver in a meaningful manner until now. In this case, academic administrators would have almost instantaneous access to success rates for their units for major competitions.

Taken as a whole, RAISE promises substantial fiscal and environmental savings. It will provide improvements in the ability of the University to identify issues, whether they are related to fiscal matters or accountability issues, and consequently allows the University to address problems at an early stage when they can be most easily rectified.

RESOURCE REQUIREMENTS

a) "RAISE II" RESOURCE REQUIREMENTS

The current RAISE initiative is funded until the end of fiscal year (FY) 2013 (April 30, 2013). Work estimates indicate that two further fiscal years will be required to address additional sub-projects that relate directly to our responsibilities under the agreement with the tri-councils and to other sponsors. A high level plan is included in Appendix A which indicates the work plan / schedule. An OTO request for two final years of project funding has been submitted by the VPRI in the 2013-14 budget cycle.

b) ONGOING RESOURCE REQUIREMENTS

Resource migration on the RAISE project is intended to follow the classic model (as below). Logically, at the start of a project, most project resources are used for development – to design, build and test new software, to achieve critical milestones within specified timeframes. As projects are completed and deployed to the production environment, technical support is required to ensure proper functioning. Additionally, the deployment of new technology involves cultural change and requires business-side support, as will certainly be the case for the Automated Research Application, Human and Animal Protocol initiatives.
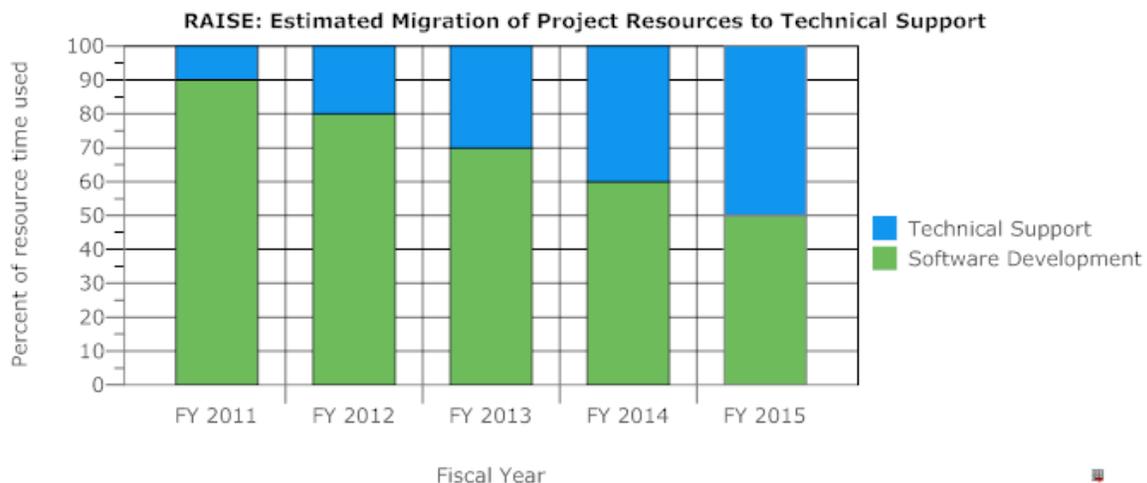
TECHNICAL SUPPORT CONSISTS OF TWO TYPES – EASI SUPPORT AND VPRI SUPPORT:

- EASI technical support is mandatory to prevent system failure, as is required for all institutional process automation initiatives. These supports include upgrades, support packs, bugs and adapting to business process change.

- VPRI technical support is required to maintain all the "rules" type tables and master data, and to resolve any redirects required for the workflow. Risks of not correctly staffing this position are lost applications and protocols and missed deadlines.

BUSINESS SUPPORT

- Increased levels of automation within the core SAP system (e.g. protocol emails and IDC distributions) ensure the work is done on time in a standard way and that calculations are correct. However, automation increases the need for quality system master data. Risks of poor master data quality range from misdirected workflows to incorrectly calculated indirect costs to improperly blocked funds.

- Putting the Application Attachment and Protocol workflows on-line will allow the transparency and accountability required by the sponsors and will allow significant efficiencies within VPRI and at the departmental level. It will also, however, require a cultural change within the PI community which will need to be heavily supported by the business side for several years. Most simply, there needs to be one VPRI support telephone number with people to answer any questions PIs may have. The risk of improperly supported cultural change is project failure.

Clearly, failure is not an option. Accordingly, base budget funding is being requested beginning in 2013-14 for an RIS and an FIS Systems Support Coordinator in VPRI (replacing Business Analysts funded OTO through the project) to address workflow maintenance, provide user support and training, and to undertake business analysis for a lower level of development work as RAISE dovetails with our normal course business over the next two years.

Appendix A – RAISE Phase I & II – Workplan/Schedule

RAISE ROADMAP	2011 Q1	Q2	Q3	Q4	2012 Q1	Q2	Q3	Q4	2013 Q1	Q2	Q3	Q4	2014 Q1	Q2	Q3	Q4	2015 Q1	Q2	Q3	Q4
	FY 2011 Q4	FY 2012 Q1	Q2	Q3	Q4	FY 2013 Q1	Q2	Q3	Q4	FY 2014 Q1	Q2	Q3	Q4	FY 2015 Q1	Q2	Q3	Q4	FY 2015 Q1	Q2	Q3
Fund Close-out - historical overdrafts																				
VPRI - Auto fund close-out analysis	Complete																			
VPRI - Data validation and monitoring reports	Complete																			
VPRI - Auto fund development		Complete																		
VPRI - Auto fund implementation/adjustments					Complete															
VPRI - Administrative Process Improvements																				
Automate Ethical protocol renewals via email			Complete																	
Automate monthly overhead postings				Complete																
Automate Cash Receipts from sponsors						In Deployment														
OVPR Research Revenue cleanup						In Deployment														
Block payroll postings to research funds				Complete																
Aging Report / Operate on Revenue Accrual basis						In Deployment														
Calendaring																				
Automate subgrant payments and controls																				
Document Imaging - RIS & MROL																				
Integrate EHS with PI portal																				
Separate Masters and Doctoral student pay / reports						In Analysis														
FReD notification - email if created / changed																				
MROL enhancements																				
Automate freezing of funds -- no protocol																				
Additional Quick Fixes - (18/2-4 wk projects)																				
Business Intelligence																				
Improvements to Research Cognos Cube																				
PI Portal - Research Application Attachment																				
Workflow/portal/business process analysis				Complete																
Development and implementation						In development														
PI Portal - Human Protocol Ethical Review																				
Workflow/portal/business process analysis				Complete																
Development and implementation																				
PI Portal - Animal Protocol Ethical Review																				
Workflow/portal/business process analysis					Complete															
Development and implementation																				
Automate Upload of Awards Results																				
Workflow/portal/business process analysis																				
Development and implementation																				
Post implementation																				
Continue Portal enhancements																				

APPENDIX B – RAISE ACCOMPLISHMENTS – OCTOBER 2012

Group 1 Projects Completed – Small to Medium Critical Projects Developed Using In-house Resources		
Focus Area	Project	Challenges Overcome / Impact / Accountability & Savings
Research Fund Summary Report , and Automated Fund Close Out	Created a comprehensive report for divisional and VPRI users. Pulls data from the financial information system (FIS) and the research information system (RIS) to provide a complete view of the financial and other status of a restricted research fund. Includes messages, alerts, warnings, and drill downs to details.	Lower risk of negative financial exposure for institution. Improved accuracy of closeout activities. More timely closeout of research funds. More standardized business processes. Clarified roles and responsibilities. Reduced number of reports required for analysis of funds (previously required 3-4 reports to get at data on this single report).
	Enabled Research Accountants to add a series of lifecycle statuses (e.g. "final financial report submitted", "final payment received from sponsor") in batch to research funds, rather than one by one.	Tools and training provided to divisions to provide direct access to information on their funds - greater transparency for PIs and BOs. Routine tasks automated - savings in staff time centrally and divisionally.
	Developed first phase of automated fund closeout and reconciliation process: Adjust deficits (AKA "uglies") two years after the grant end date (automate accounting entry to move deficit from research fund to PI's operating account).	Estimated VPRI staff time saved for application to higher level functions = **24 days/year** (these saving will increase as we automate the remaining steps in the auto-close process, i.e. adjust surpluses and budgets)
	Enabled automated clean-up of deficits on monthly basis.	
	Completed significant data cleanup: Identify and clean up historical deficits (rev < exp) and surpluses (rev > exp) (excluding Tri-council and internal sponsor).	
	Created detailed standard operating procedure (SOP) for auto-close process related to close out of funds with deficits to ensure consistent approach.	
	Delivered training to divisional users on new tools and close out process. Will be incorporated in curriculum for on-going training.	

Focus Area	Project	Challenges Overcome / Impact / Accountability & Savings
Research Ethics	Created report to identify expired/closed human protocols that are linked to active funding to check for research accounts that should be frozen (No-Posting Status).	Lower risk of research under expired protocol (**reduced risk of suspension of Tri-council funding**). Improved data quality and completeness. Students and other additional contacts now included on correspondence. More standardized business process. Better transparency on communication history. Routine tasks automated – significant savings in staff time for application to higher level functions.
	Enhanced human protocol data entry screens to improve data quality (especially on fields that trigger automated letters). a. Added on-line checks for data integrity and completeness. b. Enabled the auto-population of fields based on values entered by user in other key fields.	
	Developed nightly jobs to automatically update status of human protocols to expired or closed, as appropriate. *Deployment on hold pending data verification.*	Each month approximately **1000** human protocol related and **150** animal protocol related emails are sent automatically to an expanded group of relevant recipients (PIs, students, alternate contacts, etc.).
	Automated email correspondence, and tracking thereof, to principal investigators (PIs) and other key contacts. Letters relate to the receipt, approval, or upcoming expiry of human and animal ethics protocols. In total 18 letter types have been automated.	
	Added additional contacts to human protocols (in addition to PI) a. Added fields to human protocol to track up to three additional people (contacts) associated with the protocol (e.g. graduate student). Captures name, role, and email address to enable contacts to be copied on automated correspondences to PI. b. Enhanced "search help" to enable user to search for human protocol by new additional contacts fields.	
	Clean-up of data in the human protocol records.	
	Mapped out codes for ethics staff data entry of Human protocol information.	
	Animal protocol – revised to match new signing policy Dec 2011.	

Focus Area	Project	Challenges Overcome / Impact / Accountability & Savings
Indirect Cost (IDC) Postings to Research Funds	Enabled IDC postings to be **auto-calculated** and **auto-posted** at each month end. a. Modified RIS data entry screens to allow users to maintain a detailed indirect cost calculation rule (e.g. 40% of all direct costs excluding Travel) in the Funded Research Digest (FReD). b. Added on-line hard controls to check that IDC budget is set up according to the IDC calculation rule. c. Created a program to calculate and post the IDC actuals.	Significantly improved IDC recovery completeness, accuracy, and timeliness. Automation of routine task (estimated postings automated per year = 4000) – significant savings in staff time for application to higher level functions. Now auto-posting on a monthly basis (approximately **$1M per month** or $12M per year) as opposed to irregular/annual postings, providing more up-to-date IDC information for divisional users.
	Created reports to show details of IDC calculations and postings. a. IDC Variance Report – enables users to check details of how IDC is derived and how much will be posted at next month-end, and provides an audit trail of IDC rules per research account. b. Actual Indirect Cost Report – shows actual IDC posted for selected period of time.	
	Significant data clean-up: For accurate cutover to automated monthly calculation and posting of IDC, "catch up" postings were made by research accountants and IDC rules were checked and updated by RSO and IPO.	

Focus Area	Project	Challenges Overcome / Impact / Accountability & Savings
Research Revenue Recognition / Auto-posting of Cash Receipts	Developed programs to **automate posting revenues** to a research fund when a payment is received from sponsor. a. Program to allow research accountants to auto-upload electronic sponsor cash receipts files. b. Program to transfer revenue from general U of T fund to a specific restricted research fund, based on batch data uploaded by research accountant.	Greater transparency within individual funds, allowing more accurate and timely closeout. U of T financial statements more accurate. Lower risk of negative financial exposure for institution. Automation of routine tasks – significant savings in staff time for application to higher level functions. Enables VPRI to post revenue to individual NSERC and CIHR funds (previously all went to a single central fund, not reconciled at the grant level).
	Current data clean up: Using above new programs to perform mass transfer of historical NSERC and CIHR payments from central U of T account to individual restricted research funds.	Estimated postings automated per year = 8000
Block Payroll Postings to Invalid Funds	**Blocked Payroll Postings** Protected funds that have closed or that have a No-Posting status (funds frozen due to non-compliance) from payroll postings. Modified the payroll program to redirect such postings from research Funds to the related operating fund centre, thus avoiding violation of funding agreements with sponsors.	Improved compliance to external governance (**reduced risk of suspension of Tri-council funding**). Lower risk of deficits (uglies). Divisions reminded of meaning of No-Post (NoPo): NoPo = No research activities to be undertaken if covered by the protocol, not just "no posting transactions to the account".
	Provided Tools to Users to Identify Redirected Payroll Postings a. Modified FI Line Item (FIS posting transaction record) report to flag redirected payroll postings and include intended account numbers in text for benefit of divisional officers. b. Added a flag and filter to the Payroll Distribution Report to enable users to check (monthly) for any redirected pays in their department.	During the six month period of April 2012 to September 2012, a total of **927** payroll postings were redirected away from Funds that had closed (897 postings) or had a No-Posting status (30 postings). This involved 100 unique Funds.
No-posting (NoPo) maintenance	Automated the carry forward of NoPo at fiscal year-end as part of central year end process (previously done manually).	Improved accuracy of no-posting statuses and compliance to external governance (reduced risk of suspension of Tri-council funding). Automation of routine task - some staff time savings. Staff time savings = **2 days/year**

Focus Area	Project	Challenges Overcome / Impact / Accountability & Savings
Enhancements to Existing Reports in FIS, RIS and MROL	Optimized CFC/Fund Balances Report (ZFTR017F) to enable users to run reports (on funds available, expenses by budget category) for multiple accounts at once.	Improved reporting functionality for VPRI and divisional users including faculty.
	Small fix to "PI Monthly Report Review" to align with new institutional organizational hierarchy in FIS.	
	Modified "New PI CFC Match to MROL User ID" (ZFTR094) to show additional information (if has MROL or ESS account) to assist in identifying CFCs that need to be linked to an active MROL account.	
Training and Documentation	Developed SOPs for a number of new processes. Work is ongoing as new tools and business process changes are developed / implemented.	Sufficient training resources not currently available. Intra-institutional clarification of research-related roles and responsibilities required.
	Delivered training sessions as new processes and tools deployed. Work is ongoing and being assembled into a comprehensive curriculum, to be delivered in class and via the web.	
Auto-load of Environmental Health and Safety (EHS) data into RIS	Enabled auto-load of EHS data on Biosafety, Radiation, X-ray, Chemical permits into RIS from the EHS database. Expanded RIS to capture additional EHS protocol types.	More complete EHS data in RIS and provides records for self-linking by researcher when completing on-line application attachment (AKA Blue Form). Eliminates need to rekey EHS permit data into RIS.
Aging Report / Operate on Revenue Accrual basis	Created "Receivable Aging Report" to provide info for action / escalation by showing the number of days since a receivable was due.	Greater transparency on true status of a restricted research fund. Lowers risk of deficit at close out date; decision to write off receivable after 180 days.
Small modifications to RIS master data screens as foundation for later (Group Two) projects	Added validated lookup to building master data screen. Added three flags to institution master data screen.	Supports data capture and transfer required for on-line submission of application attachment.