Transforming the Research Administration Process

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HERUG 2016, Session R2
Outline

- Background
- Vision and conceptual design
- More Detail …
  - Reimagining our business processes
  - Demonstration
- Results
- Questions
The University of Toronto

- 5,000 research faculty
- 84,000 students on three campuses
- 9 hospital partners
- 134 research admin units
- $1.1 billion in research funding
Scale and Complexity

- 4,000+ investigators
- 3,500+ research applications
- 900+ sponsors
- 1700 programs
- 4,600+ ethics protocols
- 9,000 active accounts
- 400m in research funding
- 7,000 financial reports
- 85 external audits
The way we were….

It was 1995 …

and it was good for a very long time…
But as the years rolled along….

350,000 pieces of paper (3,500 lbs)

10,950 signatures

Productive time 15,000 hrs.

Research Administration

lack of compliance

HRIS  FIS  RIS Custom  M/F Student System
Our Vision …. 2015+

- My research applications
- My animal protocols
- My human protocols
- My intellectual property

FIS  HRIS  RIS Custom  M/F Student System
Conceptual Design

- U of T Identity Mgt. System
- Integration
- Roles
- Document Mgt.
  - Intellectual Property
  - Human Protocols
  - Research Apps.
  - Animal Protocols
- FIS
- RIS
- HRIS
- HRIS Plan 90
- Calendar Reminders
- EHS
- Student System
On a more technical level..

IBM AIX
DB2

SAP NetWeaver Java

SAP Content Server

Web Dynpro ABAP

Web Services

Net-Weaver ABAP

RFC

SAP ECC 6

U of T ID Mgt. Shibboleth

HTTP

Clockwork Consulting
Security

- Multiple firewall protection
- Utilizes https protocol
- Access based on role
- SAP ID linked to Shibboleth
- 2-factor authentication for high security roles!
Our Journey …

- **2010**
  - Application Requirements

- **2011**
  - Ethical Review Requirements

- **2013**
  - Application Roll-out

- **2015**
  - Animal Protocol Roll-out

- **2016 (est)**
  - Human Protocol Roll-out

- **2017 (est)**
  - Inventions Roll-out

**Maintenance & Support**
Reimagine our business processes ....
Old Process – Paper Based – Relied on PI Files and Memory

- Authorized Approvers
- Departments
- Faculties
- Sponsors & Programs
- Co-Investigators
- EHS Permits
- Animal Protocols
- HumanProtocols
- HR Data
There are four types of Extra Departmental Units (EDUs); types A, B, C & D. The type of EDU determines the nature of activities in which the EDU may engage.

Pre-existing Internal Application Workflow
Approval Schematic

Application

Chair/Primary Appointment

Request to Administer in Different Unit?

Yes

Admin Chair

Hospital?

Dean?

Provost?

University Approvers

No

Hospital?

Dean?

Provost?

University Approvers

• Assistant may prepare and forward to PI
• PI submits goes to Chair/Director of Unit of Primary Appointment
• Request to Administer in a different unit?
  • No
  • Yes
• Other Approvals required based on escalation rules
How: Plan 90 - Custom HR Objects:

- All roles
- University Approver Groups
- Affiliated Hospitals
- Hospital Research Offices
- Divisional Research Offices
- Animal Care Committees
- Animal Care Panels
- Research Ethics Boards
- Research Ethics Panels
- Animal Facilities
<table>
<thead>
<tr>
<th>MRA Roles (# of users)</th>
<th>MRAP Roles (# of users)</th>
<th>MRHP Roles (est. #)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI (4094)</td>
<td>Animal PI (Faculty &amp; External) (223)</td>
<td>Faculty Applicant/Collaborators &amp; External (4094)</td>
</tr>
<tr>
<td>PI Assistant (199)</td>
<td>PI Assistant (Staff &amp; Student) (35)</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Co-PI/Collaborator (4055)</td>
<td>Research Assistant (10)</td>
<td>Student (UG/G/PDF) (2000)</td>
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<tr>
<td>Departmental Chair (111)</td>
<td>Quality Assurance Officer (VPRI) (2)</td>
<td>PI Assistant</td>
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<tr>
<td>Alternate Chair (47)</td>
<td>Research Ethics Director (VPRI) (1)</td>
<td>Student PI Assistant</td>
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<tr>
<td>Dept. Business Officer (56)</td>
<td>Research Ethics Manager (VPRI) (2)</td>
<td>Departmental Chair (111)</td>
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<tr>
<td>Hospital Approver (25)</td>
<td>Committee/Panel Member (58)</td>
<td>Alternate Chair</td>
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<tr>
<td>Hospital RSO Staff (13)</td>
<td>Committee Chair (5)</td>
<td>Dean (20)</td>
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<tr>
<td>Dean (23)</td>
<td>Administrative Head (2)</td>
<td>Alternate Dean</td>
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<tr>
<td>Alternate Dean (26)</td>
<td>Facility Manager (4)</td>
<td>Provost (1)</td>
</tr>
<tr>
<td>Divisional RSO Staff (25)</td>
<td>Facility Staff (27)</td>
<td>Alternate Provost</td>
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<tr>
<td>Provost (1)</td>
<td>Facility Veterinarian (4)</td>
<td>Quality Assurance Officer (VPRI) (3)</td>
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<td>Alternate Provost</td>
<td>Training Manager (10)</td>
<td>Research Ethics Director (VPRI) (1)</td>
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<tr>
<td>Provost’s Assistant</td>
<td>System Administrator (4)</td>
<td>Research Ethics Manager (VPRI) (3)</td>
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<tr>
<td>Approvers (VPRI) (35)</td>
<td>Data Manager</td>
<td>Board/Panel Member (65)</td>
</tr>
<tr>
<td>Managers (VPRI)</td>
<td>Auditor (1)</td>
<td>Board Chair (3)</td>
</tr>
<tr>
<td>Research Accts. (VPRI) (1)</td>
<td></td>
<td>Training Manager (VPRI)</td>
</tr>
<tr>
<td>Controlled Goods (VPRI) (1)</td>
<td></td>
<td>System Administrator (3)</td>
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<tr>
<td>System Administrator (VPRI) (3)</td>
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<td>Commercialization Officer (VPRI) (1)</td>
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<td>Auditor</td>
</tr>
<tr>
<td>Data Manager (4) Auditor (5)</td>
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Demonstration ....
Visit the Helpline for system availability, extended hours prior to major deadlines and planned maintenance downtime.

My Research - TEST SITE

My Research Helpline
Mon - Fri 9:00 a.m to 5:00 p.m.
416.946.5000 | raise@utoronto.ca

Supported Browsers
Training Schedule
User Guide

Login to My Research Test Site

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www.utoronto.ca | Contacts | University Switchboard: 416 978-2011
University of Toronto, 27 King's College Circle, Toronto, Ontario, Canada M5S 1A1
Results….
Current Impact

Time:
- Faculty/Grad Students/Assistants: \(~6000\) hours saved annually (due to electronic approvals & clearly identified approval hierarchy)
- Central Research Staff: \(1,000\) hours saved annually (eliminated manual data entry, photocopying, filing etc.)

Paper:
- \(1.75\) tons of paper applications and ethical protocols eliminated

Institutional Reputation:
- Enhanced compliance with U of T and sponsor policies, greater accountability, and improved records management
- A clearer, simpler, more efficient means of obtaining institutional endorsement on research applications for our faculty

http://www.research.utoronto.ca/about/project-raise/
Key Success Factors

Improvements for All stakeholders

Extensive consultation

CIO – VPRI partnership

Dedicated
- U of T
- DCI
- Clockwork

Processes defined prior to development
Bumps/Lessons Learned

- Browser Issues – support/testing
- Password confusion (we have too many!)

- Incorrect routing due to HR data quality issues
- PIs often thought application was sent to sponsor
- Not everyone embraces transparency & accountability

- Researchers do not read instructions, watch training videos or attend workshops!
- Have live support on-hand to target issues as arise
Thank you!

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