eRAP Town Hall

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James “Chip” Masters
Alona Rabin
Donald Louie
May 20, 2022
Agenda

1. Introduction
2. Meet the eRAP team
3. Recent Accomplishments
4. User Survey Results
5. Usage
6. Sustainability
7. Future plans
Meet the eRAP team

Donald Louie
Programmer Analyst

James “Chip” Masters
Semantic Technology Director

Alona Rabin
eRAP Product Owner .NET lead

Patricia Kovatch
Professor and Dean for Scientific Computing and Data

Oketha Petty
eRAP User Support

Priscilla Acquaye
eRAP User Support
eRAP Recent Accomplishments

Based on the feedback from the user survey, we increased customer satisfaction by 50%.

- We worked closely with our user support team to resolve tickets more effectively on a daily basis

We Increased performance:

- Improved login page load time from 30 seconds to 1 second
- Added more compute cores to the web servers
- Created indexes on the databases for the patient lists and other tables
- Removed unnecessary long-running jobs

Addressed security recommendations from Mount Sinai security team
eRAP Recent Accomplishments:

**Project-specific**

- Migrated 100 international users to eRAP for Mount Sinai Acute GVHD International Consortium (MAGIC)
- Created a process to match MRNs for Pathogen Surveillance with EPIC to help to find patients locations
- Created new Worker Compensation database for WTC Health Program Clinical Center
- Created integration with iOPEN Application. iOPEN is a system that recruits patients for Clinical Trials for the Tisch Cancer Institute Biorepository (CIB)
- Optimized the transfer of data into the BioME data mart
eRap 2021 User Survey Results (1)

How would you rate your overall satisfaction with eRap?

How would you rate your satisfaction with eRap support?

Number of surveys sent: 1,103
Received: N=150
Response Rate: 13.6%
eRAP 2021 User Survey results (2)

Number of surveys sent: 1,103
Received: N=150
Response Rate: 13.6%

How critical eRAP to daily operations?

- Very Critical: 52
- Critical: 29
- Neither Critical nor Uncritical: 53
- Uncritical: 13
- N/A: 3

Would you be interested in enhancing operations within your application by repopulating dynamic data from a reliable external source (for example Epic EHR) to reduce risk of human error?

- Yes: 53
- No: 90
- N/A: 7
Raw comments from the user survey (1)

**Positive:**
“eRAP is critical to our multicenter trials. We find it very valuable - for example, we have put R code into the interface that allows us to visually represent the data and to generate statistical analyses with very little manipulation of the data needed. A massive time saver and research accelerant.”

“eRAP has been great for us. At this point our only database housed in eRAP is for historical purposes with the occasional look up.”

**User interface:**
“eRAP is not user friendly. It is very difficult to go back and forth between different sections. It would helpful to have side tabs for the list of patients on the study.”

“I use eRAP to book shared equipment and the design is unbelievably clunky and outdated.”

“The eRAP format is very user unfriendly. It is not easy to look up visits and specific patients.”
Raw comments from user survey (2)

**Emails don’t get sent:**
“There are emails which should be sent out when a task is completed or set as complete by a manager but that doesn't happen. There are also days when it lags terribly.

**Closer integration with Epic:**
“It would be great if we could have access download the names of Sinai locations and or physicians. By having the ability to view physician's profiles without having to access the internet -- that would be great. Also have the ability to achieve (sp) old records would be beneficial.”
## eRAP Active Databases

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Trial</td>
<td>4</td>
</tr>
<tr>
<td>Human Research</td>
<td>18</td>
</tr>
<tr>
<td>Non-Human Research</td>
<td>8</td>
</tr>
<tr>
<td>Operations</td>
<td>13</td>
</tr>
<tr>
<td>WTC HP Clinical Center</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PI Name</th>
<th>Department / Institute</th>
<th>Projects</th>
<th>Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathan Cohen</td>
<td>Comparative Medicine and Surgery / Medicine</td>
<td></td>
<td>570</td>
</tr>
<tr>
<td>Michael Crane</td>
<td>Environmental Medicine and Public Health</td>
<td></td>
<td>From 4,054* To 4,131</td>
</tr>
<tr>
<td>Rachel Brody</td>
<td>Pathology, Molecular &amp; Cell Based Medicine</td>
<td>4</td>
<td>3,337</td>
</tr>
<tr>
<td>Nina Bhardwaj</td>
<td>Hematology &amp; Medical Oncology / Urology</td>
<td>3</td>
<td>1,840</td>
</tr>
<tr>
<td>John Levine</td>
<td>Hematology &amp; Medical Oncology</td>
<td>3</td>
<td>From 8,982* To 9,129</td>
</tr>
</tbody>
</table>

Data as of: 22-04-01
Active = Login within last six months

* In 2021

Mount Sinai / eRAP Town Hall / May 2022
New eRAP Databases

14
12
10
8
6
4
2
0
# Databases

Existing PI  New PI
eRAP Database Growth

Cumulative eRAP Active Databases & Records Stored

Data as of: 2022-04-01
eRAP Reported Bugs

![Graph showing the number of tickets closed and open by quarter from 2020-Q1 to 2022-Q1. The graph includes data for Close Rate, Closed tickets, and Open tickets.]

- **Close Rate**: The percentage of tickets closed over time, showing a general decline until 2021-Q2, followed by an increase.
- **Closed tickets**: The number of tickets marked as closed for each quarter.
- **Open tickets**: The number of tickets marked as open for each quarter.

Source: Mount Sinai / eRAP Town Hall / May 2022
Ticket breakdown by type

eRAP Tickets: 2021-Q3 through 2022-Q1

- Database Access Requests
- New User Accounts
- Other

<table>
<thead>
<tr>
<th>Month</th>
<th>Database Requests</th>
<th>New Users</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Aug-21</td>
<td>20</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Sep-21</td>
<td>0</td>
<td>34</td>
<td>26</td>
</tr>
<tr>
<td>Oct-21</td>
<td>19</td>
<td>28</td>
<td>11</td>
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<tr>
<td>Nov-21</td>
<td>14</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Dec-21</td>
<td>0</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Jan-22</td>
<td>28</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Feb-22</td>
<td>28</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>Mar-22</td>
<td>0</td>
<td>30</td>
<td>0</td>
</tr>
</tbody>
</table>
## PI and Team Unique # of Logins: 2022

<table>
<thead>
<tr>
<th>PI</th>
<th>Departments</th>
<th># Logins</th>
<th>Total Team Logins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Crane</td>
<td>Mount Sinai WTC CCE</td>
<td>27,131</td>
<td>Total: 49,454</td>
</tr>
<tr>
<td></td>
<td>Selikoff Clinic Database</td>
<td>13,854</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WTC Mental Health</td>
<td>4,004</td>
<td></td>
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<tr>
<td></td>
<td>WTC External Provider</td>
<td>2,939</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vocational Counseling</td>
<td>958</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WTC Codes</td>
<td>568</td>
<td></td>
</tr>
<tr>
<td>Jonathan Cohen</td>
<td>CCMS - Animal Transfer</td>
<td>1,156</td>
<td>Total: 3,737</td>
</tr>
<tr>
<td></td>
<td>Center for Comparative Medicine and Surgery/CCMS - Service Requisition</td>
<td>740</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCMS - Cage Cards</td>
<td>529</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCMS - Animal Shipping</td>
<td>368</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCMS - Request for Laboratory Service</td>
<td>325</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCMS - Request for Clinical Pathology Service</td>
<td>324</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CCMS - Vivarium Access Request</td>
<td>295</td>
<td></td>
</tr>
<tr>
<td>John Levine</td>
<td>MAGIC GVHD</td>
<td>3,525</td>
<td>Total: 3,525</td>
</tr>
<tr>
<td>Judy Cho</td>
<td>BioBank</td>
<td>1,274</td>
<td>Total: 1,274</td>
</tr>
<tr>
<td>Rachel Brody</td>
<td>CIB - Pathology, Molecular &amp; Cell Based Medicine</td>
<td>1,209</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biorepository and Pathology Requests</td>
<td>104</td>
<td>Total: 1,313</td>
</tr>
</tbody>
</table>
Instrument & Room Scheduling

Equipment actively scheduled using eRAP includes:

- BD LSRFortessa X-20 Cell Analyzer
- BioRad CFX96 Touch Real-Time PCR Detection System
- GE ImageQuant LAS 4010 Camera System
- Leica DM5500 Slide Microscope MD Spectramax M5e Microplate Reader
- Miltenyi Biotec gentleMACS Octo Dissociator
- Roche LightCycler 480 PCR System
- TF Scientific Attune NxT Flow Cytometer
- TF Scientific EVOS FL Inverted Scope w/Camera
- TF Scientific QuantStudio 5 Real-Time PCR System
- TF Scientific Sorvall LYNX 4000 Centrifuge
- Zeiss Axio Observer Inverted Microscope
- Zeiss LSM 780 Invert
- Zeiss Observer 7 Inverted Microscope

eRAP is used for scheduling 29 rooms
eRAP Sustainability

- eRAP is mission-critical for a number of critical projects
- Projects are paying only for NEW eRAP development work
  - Even though there was only one new database last year, 13 PIs paid for further development of existing database in 2021
  - Charges only assessed on new development
  - No charges assessed on existing projects for ongoing general maintenance
  - No charge for bug fixes attributed to custom work

eRAP is an aging system (from 2008) and we need to assess its future path!
Q2-Q3 Plans

▶ Create custom APIs for integration with iOpen and the Cancer Institute Biorepository (CIB)
▶ Create and send quarterly eRAP usage reports to PIs
▶ Investigate options to leverage institutional resources (iLabs and Robin) for instrument and room scheduling
▶ Begin assessment of options for eRAP’s future path
Thank you