Agenda

- Business Glossary
- Best Practices
Agenda

- Business Glossary

- Best Practices
Business Glossary Goals

- Guide to NYU “jargon” for new employees
- Reference for current employees using reports from, or doing \textit{ad hoc} queries against, the UDW+
- Explanation of University processes, either directly or via links to other web-based information
- Developing cross-University agreement on common terms and definitions as part of the glossary development process
Roles in Defining Each Term

For each term, a Data Steward will have one of these roles:

- **Propose** – The office/individual responsible for creating the first draft of the definition, which will be the starting point for the Working Group.

- **Contribute or Consult** – The offices/individuals who participate in Working Group sessions to refine and agree upon a definition.

- **Agree** – Those offices/individuals recused from the Working Group meetings used to formulate the definition, *with the understanding* that the office will agree with (i.e., support) the Working Group’s decision – and not seek to revise it after agreement has been reached by the Working Group participants.

- **Document** – An individual to: help draft the definitions; record the decisions which have been agreed upon; and provide final edits before releasing the term in the Business Glossary.
Reaching Agreement on the Definition of a Term

Areas being added to MDW+
Requests from Business Glossary website
Suggestions from Data Stewards

Terms to be defined

Is Data Steward responsible for this term?

Yes (Propose)
Data Steward drafts definition for discussion
Optional Data Domain Trustee reviews
Reviewed by Working Group

Is Data Steward interested in this term?

Yes (Consult)

End (Agree)

No
No

NYU Institutional Research And Data Integrity
We will be using Google Forms as the means for Data Stewards to indicate the role for their office for each data field being defined. First, the Data Steward will use a drop down list to find their name/office.
Indicating What Role You Will Play

This is what the drop down looks like.
Once the Data Steward has indicated who she or he is, they will be able to indicate, for each field being defined, what role their office should take with regards to that field: Propose (draft the definition); Contribute (be involved in the meetings to come to agreement on the definition); or Agree (not participate in the drafting of the definition and agreeing to accept the definition developed by the Working Group.
Indicating What Role You Will Play

Please select your name/office: *
Cohen, Fred (Data Governance)

Please indicate your participation level: *

<table>
<thead>
<tr>
<th></th>
<th>Propose (draft definition)</th>
<th>Contribute (discuss definition)</th>
<th>Agree (not meet, accept decision)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name</td>
<td>○</td>
<td>●</td>
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<tr>
<td>I'll Name</td>
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<tr>
<td>Last Name</td>
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<tr>
<td>Middle Name</td>
<td>○</td>
<td>●</td>
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<tr>
<td>NYU ID</td>
<td>●</td>
<td>○</td>
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</tr>
<tr>
<td>Net ID (CS), Network User ID (WD)</td>
<td>●</td>
<td>○</td>
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</tr>
<tr>
<td>N Number</td>
<td>●</td>
<td>○</td>
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</tr>
</tbody>
</table>
Questions?
Agenda

• Business Glossary

• Best Practices
  – Office of the Bursar
Data Integrity and Reporting

Office of the Bursar
April 27, 2016
Agenda:

• Who is Data Integrity?
• Data Integrity history.
• Review major changes in student financials data integrity oversight by covering:
  • Then: State of the process/issue when Data Integrity group was formed.
  • Now: State of the process/issue currently.
  • How: Bridge between ‘then’ and ‘now’ with more details on how the ‘now’ was accomplished.
  • Throughout, a focus on prioritizing time to:
    • Understand how the process/issue was currently defined or working.
    • Contrasting the current state with our desired state of the process/issue.
    • Identifying resources needed to transition from current to desired state, and enacting that transition.
    • During all parts of the process, documenting for posterity.
Common Terms:

- SIS: Student Information System.
- FAME: General Ledger system.
- Student Financials: All student data posted on the Bursar account (tuition, fees, and housing charges, payments, etc.).
What We Do:

- Data Integrity and Reporting in the Office of the Bursar is responsible for ensuring that NYU student bills are accurate, complete, and issued timely.
- We are also responsible for the accuracy and issuance of student tax form 1098-T, student payment reconciliations, item type setup and management, resolving duplicate student IDs, and other aspects of data integrity with SIS as it relates to student financials.
- As for reporting, we provide and build student financials reports for a number of offices across the university, in addition to responding to internal requests.
- Finally, we ensure that student financials data is accurately mapped and flowing to the general ledger from SIS.
Data Integrity and Reporting Mission Statement:

- We are committed to maintaining the integrity of the University’s student financials data by assuring transactions are processed, and recorded properly and efficiently, thus enabling accurate reporting, management, and decision-making.
- This is accomplished through documentation of and training on Bursar processes as well as analysis of student data. We also facilitate transparent and timely communication with other departments regarding process changes that affect day-to-day operations as well as data flow to the general ledger.
- This will ensure that student financials data is correct and transparent, while providing communication and training to establish confidence and efficiency in Bursar processes.
Accurate and timely billing is essential for a tuition-driven university.
Data Integrity History – Prior to 2012:

- Most student financials processes were highly manual, with limited testing and reconciliations.
- Structures were not in place to validate accurate reporting for crucial processes such as Collections.
- Most student financials data issues were reported by the end user (students) and handled reactively, not proactively.
- Little to no documentation existed on key and data-heavy processes such as tuition calculation, billing, and student tax forms.
- There were many known data issues with significant backlogs.
- Historically, organizational structure created a single point of failure.
Data Integrity History – Implementation

• Working Group to address immediate concerns in Spring 2012.

• Official formation of Data Integrity in Summer 2012.
What We Have Accomplished:

- Enacted a structured testing and reconciliation process for student account charge setup, student billing, and student tax forms.
- Created a formal and standardized process across all university schools for collecting each semester’s specialized school-based rates.
- Created a customized student aging report by school to facilitate the collections effort.
- Implemented monthly and term billing reconciliations to ensure billing accuracy of data and that all in billed population have received a bill. No fall out.
- Eliminated backlogs and established formal processes for table validation, duplicate ID, and cash reconciliations.
Tuition Calculation: Posting student charges to billing account in SIS.

Then:
- School-based fees collection solely e-mail based without Budget Office review.
- Unstructured manual testing (manual review of students from various populations).

Now:
- Extensive query-based testing prior to calculation.
- Post-calculation query review for potential issues.
- School-based fees structured with template and workflow from schools, to Budget for approval, to Bursar for setup.
How: Answering the below questions with querying and reviewing exceptions.

- Does every enrolled student have a tuition charge? A fees charge?
- Are there any duplicate tuition or registration fee charges?
- Are the fees populated in the amounts specified by the Budget Office?
- Are due dates accurately assessed based on population?
- Are there any egregiously high balances, or suspiciously low balances?
- General schools test: Manual test of one student from each school for backup review of all components for that school (tuition, registration fee, health insurance, item type naming convention, etc.).
Item Types: The unit by which financial detail posts to the student account and flows to the general ledger.

Then:
- Highly manual and undocumented in all aspects of the process.
- Inconsistency in item type groupings of what posted to general ledger (example: some estimated item types went to GL, some did not).

Now:
- Automated item type roll from term to term.
- Formal checklist to validate that there are no issues post-roll.
- Query-based review of roll with exception review.
- Consistency improved with ongoing cleanup (remove unused where applicable, consolidated item types where possible, and removing estimated item types from general ledger flow).
How:

- Checklist items created as Brio queries.
- Queries validate checklist items.
- Exceptions populate for manual review.
Billing Inputs: Posting data from external offices that affects billing accounts (housing, aid, etc.).

Then:
- Some communication to input areas (Res Life, Insurance, Financial Aid) to ensure items posted prior to billing.

Now:
- Billing calendars are maintained. Data Integrity communicates with departments that provide billing inputs on a structured schedule each term.
- Checks to ensure inputs are accurate and complete.
How:

- Query for duplicate housing charges after initial post.
- Query to ensure both meal plans and housing charges are posted.
- Query to ensure all major types of financial aid are anticipated (federal loans, scholarships, etc.).
- Query for active student agreements that affect tuition calculation (are study away agreements populated on student accounts?).
- Amounts comparison to prior year (to ensure no significant fallout).
Bill Review: Review of bill data prior to issuance.

Then: A portion of the bills were manually checked for issues.

Now:
  * All bills are reviewed with a thorough checklist of items, mostly via querying and review of exceptions.
  * A review document is kept for each monthly, term, and daily bill run that indicates what was reviewed and any issues found.
### Sample Bill Review Section

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Due Date:</td>
<td>January 5, 2016</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Bill Date:</td>
<td>November 30, 2019</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Total balance per bill file agrees to system</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Are there any students with balances outside of specified parameters?</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Search for any erroneous duplicate charges. Search file using keywords</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Tuition/Tuition</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. 101 - Tuition</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. 102 - Arts</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. 104 - Maint/Maint</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. 106 - Other</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. Housing/Room items beginning with a 400</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>g. Health/Health items beginning with 301</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Identify any incorrect term-specific item types. Search file using keywords</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Jan/January/Winter</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Fall</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Summer</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Students who should not have tuition costs generated charges are properly reflected in the file (or excluded if not within the billing parameters)</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Rackler</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. NOTCREASED Students</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Students with Res Ed Charges have a matching RA Award included on their bill</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. RA Award. Item Type 020664.800000</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Identify duplicate finance charges or finance charge credits that would make the bill incorrect or unclear</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### How:
- Bill detail populated in Excel.
- V-Lookups and filtering used to verify checklist items.
Billing Reconciliation: Did everyone who should have received a bill, receive one?

Then: Relied on end user (students) to report missing bills.

Now:
- Reconcile expected students to billed population to ensure everyone who is qualified for a bill was billed. This is done using querying and manually reviewing exceptions.
- For term billings: Further reconcile that all enrolled and qualified students have a bill.
- If any fallout, those students are billed via population selection and the issue is researched and documented.
### Sample Reconciliation Output

#### Expectations to Billing Run-Term Billing 1166

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Expected Population</strong></td>
<td>32,048</td>
</tr>
<tr>
<td>Less populations not in billing parameters:</td>
<td></td>
</tr>
<tr>
<td>No Bill Indicator</td>
<td>(19,656)</td>
</tr>
<tr>
<td>Programs to Ignore (Grad, AD, Shanghai)</td>
<td>(1,385)</td>
</tr>
<tr>
<td>Adjusted Expectations</td>
<td>11,007</td>
</tr>
<tr>
<td>Reconciling Items</td>
<td></td>
</tr>
<tr>
<td>In expectations, but not billed</td>
<td>(3)</td>
</tr>
<tr>
<td>Timing - enrolled after billing run, but before expectations query</td>
<td>(38)</td>
</tr>
<tr>
<td>Missing only with revenue or former program - pop select</td>
<td></td>
</tr>
<tr>
<td><strong>Total reconciling items</strong></td>
<td>(41)</td>
</tr>
<tr>
<td><strong>Total per Billing Run</strong></td>
<td>11,169</td>
</tr>
<tr>
<td>Duplicates in Billing Run</td>
<td>(121)</td>
</tr>
<tr>
<td>Adjusted Billing Population</td>
<td>10,988</td>
</tr>
<tr>
<td>Reconciling Items</td>
<td></td>
</tr>
<tr>
<td>Billed, but not in expectations</td>
<td>(2)</td>
</tr>
<tr>
<td>Timing - paid in full</td>
<td></td>
</tr>
<tr>
<td><strong>Total Reconciling Items</strong></td>
<td>(2)</td>
</tr>
</tbody>
</table>

**Difference:** -

**How:** A series of queries run immediately following the billing job run. These are used to identify an expected population and exceptions to that expected population.

The reconciliation is then reviewed manually for expected but not billed, and billed but not expected students.
Student Tax Form 1098-T: Tax form that reports billed amounts for student education credit calculation.

Then:
- Manually check ~100 students’ forms (out of approximately 50,000) in various populations for issues.

Now:
- ~98% of the populations’ form data is tested via queries and reviewing exceptions (similar to tuition calculation).
- A full reconciliation done for expected forms to actuals.
- Reconciliations done for online form upload and mailed forms.
<table>
<thead>
<tr>
<th>Data Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total forms on 2015 transmittal file</td>
<td>41,877</td>
</tr>
<tr>
<td>Total Forms Uploaded to TouchNet:</td>
<td>40,525</td>
</tr>
<tr>
<td>Total TouchNet Upload Exceptions (failed load, no TouchNet presence):</td>
<td>1,347</td>
</tr>
</tbody>
</table>

### Mailed File Reconciliation

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Opt-In Population with a validated 2015 form:</td>
<td>31,505</td>
</tr>
<tr>
<td>Total Forms on Mailed File:</td>
<td>10,368</td>
</tr>
</tbody>
</table>

**How:** For the mailed and upload file, review expected population less known reconciling items to ensure that all students who have a valid form get their form uploaded.

Then for the mailed file, remove all students who opted out of mailing, and ensure they are on the mail file that goes to Reprographics.
Student Financials to General Ledger Reconciliation

Then: No formal process.

Now:
• Month-end reconciliation of student financials transactions from SIS to general ledger.
• Month-end accounts receivable reconciliation of student financials data between SIS and general ledger.
• Work more closely with year-end reconciliations and audit requests.
How:

- Month-end reconciliation: built out Brio queries that review both SIS and FAME with an automated comparison, with review for exceptions.
- Comparison of A/R balance between SIS and FAME; Brio reconciliation and tie-out of the variance due to timing or other common issues.
Aging: As balances become past due, they ‘age.’ Accurate and timely reporting of aging accounts leads to better collections rates.

Then:
- Ad hoc reporting with often inaccurate data due to lack of knowledge around aging reports and process.
- System issue of some charges not being assessed due dates, contributing to inaccurate aging.

Now:
- Aging reporting highly structured and modified to suit collections needs.
- Reporting run twice monthly and distributed to Collections group.
- Collections success increased from 95% to 98%.
- Due date issue defined and addressed; missing due dates improved by 85% in the past year.
How:
- Continuous improvement project to identify aging/collection needs for reporting.
- SIS modification to change Credit History and Aging process to fit those needs.
- Reports built out in Brio to address reporting needs.
- Business process put in place and staff trained to run reports on designated days (15th and last day of the month).
- Reporting process documented.
- Due dates updated via a periodic cleanup bill run for all terms and all populations to pick up unbilled charges.
Table Validation Issues: PeopleSoft issue where financials data is inconsistent in two different places (tables). An Oracle-delivered process exists for schools to fix these errors manually.

Then:
- No staff reviewing table validation errors.
- Backlog of unresolved errors affecting ~50 students’ financial data.
- Errors resolved on student contact.
- Little understanding of table validation as a concept.

Now:
- Error backlog resolved.
- Weekly process to run table validation reports and resolve any errors, modeled on best practices from other universities.
- Process and error resolution documented.
How:

- Use of HEUG forums and PeopleBooks to find best practices for table validation.
- Heavy testing of various parameters to ensure table validation fixes process was working as designed.
- For outstanding issues, worked with Financial Systems Management, ITS, and Financial Aid to research and resolve.
- Documented step-by-step instructions for how to resolve new issues by issue type (multiple types of table validation errors).
Duplicate IDs: Two financial records for one student in SIS; often with duplicated or inconsistent data.

Then:
  • >800 instances of duplicate IDs on SIS with financial data.
  • No formal Bursar process for resolution; IDs resolved at student request or administrator request.

Now:
  • Backlog resolved.
  • Formal process and workflow in ServiceLink for reporting duplicate IDs and resolving data transfer to good ID with Registrar.
  • Documented resolution process.
How:

- Project with Registrar to resolve backlog.
- Collaboration with Registrar to create workflow in ServiceLink for new issues.
- Data Integrity runs weekly report of any IDs with duplicate markers and resolves with Registrar to find any fallout.
Cash Reconciliation: Cash banked by Bursar reconciles with payments posted on SIS.

Then:
- Significant backlog.
- Limited process documentation.
- Temp processing the reconciliations – single point of failure.
- Difficult and lengthy process to resolve/identify reconciling items.

Now:
- Backlog eliminated.
- More automation created.
- Process fully documented.
- No single point of failure.
How:

• Temporary employee documented process and trained staff.
• Trained staff became subject matter expert and expanded on documentation.
• Reconciling items resolved more quickly due to cross-trained staff doing recs being more familiar with SIS/processes.
Documentation:

- Runbooks created for major processes.
- Billing calendars maintained for each major term billing.
- For minor processes, documentation of instructions and background details.
- For each term, monthly, and daily billing, record of review process, any issues, and reconciliation fully documented.
- For each tuition calculation cycle, testing is documented.
- For student tax forms, record of reconciliation and testing documented.
Training: Staff understanding data and systems

- Full round of staff training on PeopleSoft Student Financials and TouchNet.

- Created/Issued TouchNet Staff Guide.
  - Comprehensive document on functionality.
  - Step-by-step guide for walking users through that functionality in TouchNet.
  - Workflow when encountering technical issues with users on TouchNet.

- Round of more advanced manager training on PeopleSoft Student Financials.

- All documents still in use among various Bursar departments for new staff training.
What’s Next?

- Automate course and university fee collection and setup into SIS (going live for Fall 2016).
  - This project is intended to maximize transparency and automation with charge and billing set-up.
  - Moves the standard process from Excel/e-mail into SIS, where the flow can be audited and reported on, and setup is largely automated as opposed to manual.

- Integrate Graduate Stern’s student information system (AIS) into SIS.
  - Fold Graduate Stern into the central university’s billing processes, eliminating redundancies and workarounds for over 3,000 students.
  - Currently multiple processes have a 1-2 day lag for data posting into SIS or AIS, and some data is only in SIS, creating data inconsistencies and delay of student services such as refunds.
  - AIS processes are heavily manual, so a move to SIS will lessen data input errors and increase speed of data adjustments.
  - Students currently have two systems where they can see data; this move will change this to one system with comprehensive and up-to-date data.
What’s Next?

- Analyzing student payment application in SIS with an eye to reducing payment allocation issues. Fixing these issues will make student billing accounts more understandable to students and staff.
  - Currently payments can ‘swap’ with older term payments, which is confusing for staff and students.
  - Data Integrity is working with Bursar Operations and Financial Systems Management to research why these occur, test setup changes, and if possible limit swapping to the current term only.

- Project to change methodology for 1098T reporting from billed amounts to conform with IRS mandate for 2016 to report on payments for qualified expenses.
  - NYU has always reported billed amounts. Switching to paid amounts changes reliance to payment data, which is complicated by payment application issues.
  - Data Integrity will work with Tax and Financial Systems Management to ensure a seamless transition with accurate form data.
Questions?
Thank You!