MONITORING DATA INTEGRITY
MICHELLE LELEMPYSIS, CAUSEIS
• Why should we care?

• What tools do you have to manage data integrity?

• Integrating data integrity into everyday iMIS life

• Examples of monitoring data integrity

• Questions and ideas
Every session that you have attended at Conference relies on good data.

What are your sources of data within your iMIS environment?

- iMIS staff
- Members and Donors via self service
- Third party tools with integration
- Imported data
- What other data?
MONITORING DATA INTEGRITY
WHY SHOULD YOU CARE?

• We all know the rule of “Garbage in = Garbage Out”

• Information and data age

• Data is considered by Gartner as the single biggest asset your business owns.

• How to we manage, protect and control it?
Tip: Use new terminology “Data Management” vs “Data Integrity”

Develop a **Data Management Plan** with input from all division including:

- Access to data and SQL
- Import and integration components
- Escalation points
- Timing anomalies that have been identified
- Gaps in data management
- Training plans that focus on data management
- Data definitions should be incorporated into your procedures
- Not to plug a product .... But have you heard of iDocument?
- What else?
MONITORING DATA INTEGRITY
WHY SHOULD YOU CARE?

DescribE FIELDS AND THEIR PURPOSE BY GENERATING NOTES FOR EACH OBJECT.

AN EXAMPLE OF THE DOCUMENTATION GENERATED BY iDOCUMENT.
MONITORING DATA INTEGRITY
WHY SHOULD YOU CARE?

• SQL Server software to monitor internal and external access of the data –
  – SolarWinds
  – GreenSQL
  – RedGate

• If you are hosted with ASI Hosting they will let you install these software however only if you are in a dedicated environment.
Part of your Data Management Plan you should create a **Minimum Data Set**

- Work with the business to identify what is your critical data

- Data Analytics session we reviewed key membership fields join date, gender, birth date, category, email

- What else? Workplace data, profile / demographic data
What tools can you use to manage data integrity in your iMIS environment?
TOOLS FOR MANAGING DATA INTEGRITY

• Use what you have to create exception reports
  – IQA
  – SQL scripts
  – Crystal Reports
  – SSRS
  – Staff site alerts
  – Others
IQA REPORTS

• You have to learn iQA – it is the backbone of iMIS!

• iQA is a simple reporting tool within iMIS that should be used for developing a suite of data integrity reports.

• What reports should you have?
IQA REPORTS

- Membership
  - Paid thru dates (missing, too far in the future, behind)
  - EFT Expiring Credit Cards
  - Members without an email
  - Membership with any missing data from the defined Minimum Data Set
  - Members without a login
# IQA REPORTS

## Customers

<table>
<thead>
<tr>
<th>Manage customers</th>
<th>Organize</th>
<th>New</th>
<th>Edit</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage committees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View activity tasks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage QAS</td>
<td>$/ContactManagement/DefaultSystem/Queries/Adva</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage duplicates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generate reports</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Import activities</td>
<td></td>
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</tr>
<tr>
<td>IQA</td>
<td>Ad hoc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- IQA Contacts
- Set up tables
- Set up module
- Set up fundraising

- Customers help

## IQA

- Annual DIT Reviews
- Annual Membership Reviews
- Data Fortnightly Reports
- Data Monthly Reports
- Data Weekly Reports
- Intens and DITS
- Missing Data Reports
- Monthly Adhoc
- Monthly Payments
- Promotion Figures
- Renewals
- Weekly Check Reports
### Missing Mobiles Change log

#### Query Sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>CsContact</td>
<td>Business Object</td>
</tr>
<tr>
<td>CsNameLog</td>
<td>Business Object</td>
</tr>
</tbody>
</table>

#### Relations

#### Description

- Custom (When CsContact.IMS.Id = CsNameLog.Id): Equals
  - [Add Source]
## Missing Mobiles Change log

### Query Filters

<table>
<thead>
<tr>
<th>Where</th>
<th>Property</th>
<th>Comparison</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CsContact.Member Type</td>
<td>Equal</td>
<td>Member Tas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Member SA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Member NT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Member NSW</td>
</tr>
<tr>
<td></td>
<td>CsNameLog.Date Time</td>
<td>Between</td>
<td>Run and Run</td>
</tr>
<tr>
<td></td>
<td>CsNameLog.Sub Type</td>
<td>Not Equal</td>
<td>ADD</td>
</tr>
<tr>
<td></td>
<td>CsNameLog.Log Text</td>
<td>Contains</td>
<td>TOLL</td>
</tr>
<tr>
<td></td>
<td>CsContact.Toll free</td>
<td>Empty</td>
<td></td>
</tr>
</tbody>
</table>
IQA REPORTS

Missing Mobiles Change log

View: Selected
Mode: basic

Query Display Columns

- Only display unique results

Selected

<table>
<thead>
<tr>
<th>Display</th>
<th>Property</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>CsContact.IMSId</td>
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<tr>
<td>✔</td>
<td>CsContact.Major Key</td>
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</tr>
<tr>
<td>✔</td>
<td>CsContact.Member Type</td>
<td>3</td>
</tr>
<tr>
<td>✔</td>
<td>CsContact.Gender</td>
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</tr>
<tr>
<td>✔</td>
<td>CsContact.Prefix</td>
<td>5</td>
</tr>
<tr>
<td>✔</td>
<td>CsContact.FirstName</td>
<td>6</td>
</tr>
<tr>
<td>✔</td>
<td>CsContact.LastName</td>
<td>7</td>
</tr>
<tr>
<td>✔</td>
<td>CsNameLog.Log Text</td>
<td>8</td>
</tr>
<tr>
<td>✔</td>
<td>CsNameLog.User Id</td>
<td>9</td>
</tr>
<tr>
<td>✔</td>
<td>CsContact.Toll free</td>
<td>10</td>
</tr>
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</table>
IQA REPORTS

Membership Status

Query Filters

<table>
<thead>
<tr>
<th>Where</th>
<th>Property</th>
<th>Comparison</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Member Type</td>
<td>Equal</td>
<td>Member NT, Member Tas,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Member SA, Member NSW</td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Not Equal</td>
<td>Active, No Service</td>
</tr>
<tr>
<td>MBId</td>
<td>Member Type</td>
<td>Category</td>
<td>Status</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>136200</td>
<td>M-SA</td>
<td>F1Y1</td>
<td>x</td>
</tr>
<tr>
<td>224651</td>
<td>M-NSW</td>
<td>F2Y1</td>
<td>P</td>
</tr>
<tr>
<td>224073</td>
<td>M-NGW</td>
<td>F2Y1</td>
<td>P</td>
</tr>
<tr>
<td>224743</td>
<td>M-NSW</td>
<td>F2Y1</td>
<td>P</td>
</tr>
<tr>
<td>221667</td>
<td>M-NGW</td>
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<td>P</td>
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<tr>
<td>241779</td>
<td>M-NSW</td>
<td>F2Y1</td>
<td>P</td>
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</table>
## IQA REPORTS

<table>
<thead>
<tr>
<th>MBId</th>
<th>Member Type</th>
<th>Category</th>
<th>Status</th>
<th>Full Name</th>
<th>Company</th>
<th>State Province</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>136290</td>
<td>M-SA</td>
<td>Full</td>
<td>X</td>
<td></td>
<td>St Vincent's Hospital</td>
<td>SA</td>
<td>COWELL</td>
</tr>
<tr>
<td>224651</td>
<td>M-NSW</td>
<td>FY1</td>
<td>P</td>
<td></td>
<td>Royal Prince Alfred Hospital</td>
<td>NSW</td>
<td>SURRY HILLS</td>
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<tr>
<td>224673</td>
<td>M-NGW</td>
<td>FY1</td>
<td>P</td>
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<tr>
<td>224741</td>
<td>M-NSW</td>
<td>FY1</td>
<td>P</td>
<td></td>
<td>Gosford District Hospital</td>
<td>NSW</td>
<td>REDfern</td>
</tr>
<tr>
<td>225687</td>
<td>M-NGW</td>
<td>FY1</td>
<td>P</td>
<td></td>
<td>Wollongong Hospital</td>
<td>NSW</td>
<td>TURRAMURRA</td>
</tr>
<tr>
<td>245779</td>
<td>M-NSW</td>
<td>FY1</td>
<td>P</td>
<td></td>
<td></td>
<td>NSW</td>
<td>WOOLLARIA</td>
</tr>
</tbody>
</table>
Some tips for iQA
- Shhhh you can add iQA back into Desktop for iMIS 20.2 ;-)
- Remember to use your key_contact
### Membership Status

**Display**

- **View**: Selected
- **Mode**: Advanced

**Query Display Columns**

<table>
<thead>
<tr>
<th>Display</th>
<th>Property</th>
<th>Function</th>
<th>Alias</th>
<th>Subtotal</th>
<th>Order</th>
</tr>
</thead>
<tbody>
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<td>✔️</td>
<td>iMIS Id</td>
<td>None</td>
<td>key_contact</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>✔️</td>
<td>Member Type</td>
<td>None</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>✔️</td>
<td>Category</td>
<td>None</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>✔️</td>
<td>Status</td>
<td>None</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>✔️</td>
<td>Full Name</td>
<td>None</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>✔️</td>
<td>Company</td>
<td>None</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>✔️</td>
<td>State Province</td>
<td>None</td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>✔️</td>
<td>City</td>
<td>None</td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

- **Only display unique results**

[Refresh]
IQA REPORTS

![iMIS15](image)

**Customers**

- Manage customers
- Manage committees
- View activity tasks
- Manage QAS
- Manage duplicates
- Generate reports
- Import activities
- IQA
  - Contacts

**IQA**

<table>
<thead>
<tr>
<th>iMIS Id</th>
<th>Memo</th>
</tr>
</thead>
<tbody>
<tr>
<td>136260</td>
<td>M-SA</td>
</tr>
<tr>
<td>224651</td>
<td>M-NSV</td>
</tr>
<tr>
<td>224675</td>
<td>M-NSV</td>
</tr>
<tr>
<td>224743</td>
<td>M-NSV</td>
</tr>
<tr>
<td>235667</td>
<td>M-NSV</td>
</tr>
<tr>
<td>245779</td>
<td>M-NSV</td>
</tr>
</tbody>
</table>
• What other reports could you create?
  – Financial reporting
  – Event set-ups
  – Fundraising processing
  – Unposted GL entries
  – Members not receive specific communications
  – ?
STORED PROCEDURES – DATA INTEGRITY

• Always test new stored procedures that update/insert data against a current iMIS test database!

• Have others review the results of a new procedure in the test database and receive approval to deploy a new procedure in the production database.

• When creating procedures, always have a section in the procedure that identifies the goal of the procedure, when it was initially deployed, who wrote it (or modified it) and use full names when commenting on who worked on the procedure.
• Keep in mind that if you are writing a procedure that affects the Name table, there are triggers on the table that can slow processing down if a large number of records are being acted on.

• If writing a procedure that updates information, make sure that the procedure checks to see if the specific records need updating to begin with. That is, filter out the universe of records that need to be acted on.
STORED PROCEDURES – DATA INTEGRITY

• When scheduling, have test runs against the test database to get a sense of how long the procedure normally takes to run. Allow for a current gap in the SQL job scheduling to fit the new procedure in.

• Backup! Backup! Backup!

• Who is using SQL Stored Procedures for data integrity jobs?
Examples that we frequently see –

- Job coding in Financials for division
- Uppercase on suburb
- Phone formatting
- Australia removal from address
- “Disabled” login on web credentials
- Activity tasks to notify a staff about an issue
• Examples that we frequently see –
  – Job coding in Financials for division
  – Uppercase on suburb
  – Phone formatting
  – Australia removal from address
  – “Disabled” login on web credentials
  – Activity tasks to notify a staff about an issue
• Oh did you see the 75 new feature that iMIS Q4 has?

• One of those is the new Data Integrity panel in the Dashboards of staff sites
USE STAFF SITES TO MONITOR DATA INTEGRITY

**Individuals missing primary email**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>Member Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr 101723 101723</td>
<td>Siemens Industries</td>
<td>Member</td>
</tr>
<tr>
<td>Ms Nov 04 3141212</td>
<td>Dummy Establishment</td>
<td>Former Member</td>
</tr>
<tr>
<td>Mr 75915 75915</td>
<td>Dummy Establishment</td>
<td>Former Member</td>
</tr>
<tr>
<td>Mr Unknown 94374</td>
<td>Dummy Establishment</td>
<td>Former Member</td>
</tr>
</tbody>
</table>
USE STAFF SITES TO MONITOR DATA INTEGRITY

Event revenue: 0
Last year's total: 0

Event registrations: 0
Last year's count: 0

Program item registrations: 0
Last year's count: 0

Top 10 event revenue:
No data found

Registrations by member type:
No data found

Events missing dates:
There are no records.
USE STAFF SITES TO MONITOR DATA INTEGRITY

Product revenue: 0
Last year's total: 0

Product orders: 0
Last year's count: 0

Products sold: 0
Last year's count: 0

Product sales by member type: No data found

Product sales by category: No data found

Top products:

<table>
<thead>
<tr>
<th>Product</th>
<th>Last Ordered</th>
<th>Total Quantity Sold</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There are no records.
USE STAFF SITES TO MONITOR DATA INTEGRITY

• How else can you use this functionality to build data integrity monitoring tools?
USE STAFF SITES TO MONITOR DATA INTEGRITY

- Staff site Alerts!

Use this information when you talk with our constituents to encourage them to take advantage of their benefits.

**Membership**

- **iMIS ID**: 759185
- **Member type**: Former Member
- **Billing category**: Resign O.R.O.
- **Chapter**: ETU Victoria Division
- **Renewed**
- **Last updated by**: MANAGER
- **Date added**: 31/12/1899
- **Major key**
- **Status**: Resigned
- **Paid through**: 31/12/1999
- **Member since**: 03/04/1995
- **Last update**: 15/10/2015 18:14

**Addresses**

- **Residential**
- **Preferred Mailing Address**
POINTS TO TAKE AWAY TODAY

• Data sources and data integrity

• Develop a Data Management Plan with key teams and management

• Identify your Minimum Data Set

• Develop iQA Reports for daily, weekly, monthly and adhoc checks

• Identify SQL Stored Procedures for updating fields

• Develop Staff Sites dashboards

• Implement Staff Site Alerts
QUESTIONS

CONTACT ME

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WITH THANKS TO OUR SPONSORS
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COMPUTER SYSTEM Innovations Sustainable Solutions
iInfinity
causeis dataimpartsolutions, LLC
JOHNSTONE ENTERPRISES
Lane Services LLC
integr8tiv
Informz
Visual Antidote
Intuitive Business Concepts
4 Mayo
KiSS Consulting
Millpost Technologies
Pseudocode
(C) Systems Global