# Mapping your data

Your existing data may be coming from multiple sources, some electronic, some paper based and some residing in people's memory. "Mapping" refers to the activity of taking existing data that was labeled in a certain way and "slotting" it into a CiviCRM structure.

## Data Mapping is about Resolving Potential Issues

Creating a Data Mapping Specification requires discovering and resolving potential issues prior to the data mapping being implemented. In data migrations and integrations, any number of differences between how data is stored can cause data to be lost or miss-represented.

For example, it may be that your source data has a text field and your target date repository uses an enumerated list. Without analyzing the data and providing logic for mapping the text values to the allowable list values (or initiating appropriate data clean-up efforts), you are likely to experience unexpected errors during the system migration.

## The Key Elements of a Data Mapping Specification

Essentially a data mapping specification will analyze, on a field-by-field basis, how to move data from one system to another.  For example, if I were to orchestrate a data feed from the *Bridging the Gap* article repository to a search engine, I would want to map key attributes of the article, such as the title, category, and content to the attributes specified by the search engine. This analysis exercise would ensure that each piece of information ended up in the most appropriate place in the target data repository.

To achieve this goal, a Data Mapping Specification contains the following elements:

- List of attributes for the original source of data (often with additional information from the data dictionary)
- A corresponding (or “mapped”) list of attributes for the target data repository (again, with additional information from the data dictionary)
- Translation rules defining any data manipulation that needs to happen as information moves between the two sources, such as setting default values, combining fields, or mapping values

#### EXAMPLES OF DATA INTEGRITY INVOLVING MAPPING

Ensuring data integrity when data maps are present requires diligence to ensure:
• Trustworthiness of mapped information over its life cycle and use

• Integrity is accomplished by validation and regular “checkups” of the data flow and map performance.

• Mapped entries reflect current content through the entire workflow, consistent with the use case for the map in both primary and secondary uses of the same data.

•Integrity is achieved by monitoring the mapping results specific to the use case and how those results are re-purposed for other uses.
• Maintain the intended content of a validated map, in case the mapped data Structure changes through data processing. Ongoing vigilance is required to test results of the map.
• The map provides uniform, reliable, complete, and unchanged semantic output through data stewardship protocols

# A Data Mapping Sample Template

Here's a simple data mapping template and example you can use to see how this works in action. It's a hypothetical example assuming that we're sending a data feed from the *Bridging the Gap* article repository to a search engine.

| Source Data - BTG Article | | | | Target Data - Search Engine | | | |
|---|---|---|---|---|---|---|---|
| **Attribute Name** | **Required** | **Type** | **Notes** | **Attribute Name** | **Required** | **Type** | **Notes** |
| Article Title | Yes | Text | Can contain HTML. | ContentTitle | Yes | Text | |
| Article Author | Yes | Look-Up | | n/a | n/a | n/a | |
| Article Category | Yes | Look-Up | | Keyword | No | Text | |
| Article Content | No | Text | Can contain HTML. | ContentText | Yes | Text | Truncates to 40 chars |
| URL | Yes | URL | | URL | Yes | URL | Truncates to 15 |

As you can see, even a simple data mapping exercise encounters potential data mapping issues that would best be handled proactively in a business-centered way than retroactively in a technically-focused way.

Solid business analysis through data modeling will prevent these issues before they happen, by discovering them in advance, collaborating with business and technical stakeholders to find feasible solutions, and initiating any appropriate data clean-up and normalization efforts.

References

Retrieved 2nd June 2017 from http://www.bridging-the-gap.com/what-is-data-mapping/

AHIMA. "Data Mapping Best Practices." Journal of AHIMA82, no. 4 (April 2011): 4—52. Available in the AHIMA Body of Knowledge at ahima.org.