Taxonomy Development
Business Classification Schemes
Taxonomy – Thesaurus - Classification

- **Taxonomy** is the practice and science of taxonomic classification.
- **Thesaurus** more commonly means a listing of words with similar, related, or opposite meanings.
- **Classification** is the act of placing an object or concept into a set or sets of categories (such as a taxonomy or a subject index), based on the properties of the object or concept.
Why do we classify?

- Aggregation
- Discovery
- Disposition management
- Access/security
- Filtering
- Reporting
Framework Basics

1.1 Purpose and Scope
1.2 Approach
1.3 Communication
1.4 Taxonomy/BCS Design and Maintenance
Purpose and Scope (1)

- Mapping key stakeholders
  - Who will benefit from taxonomy
  - How do they relate

- Defining purpose and intent
  - Boundaries, inclusions, exclusions
  - To structure and organize
  - To seek common ground
  - To allow for cross-disciplinary mapping
Purpose and Scope (2)

- Determining technology environment
  - Physical files and shared electronic files (navigation/retention)
  - Intranet, portals, content management systems (navigation/retention)
  - Document and records management systems (metadata, navigation, inheritance)

- Assessing information management context
Approach
Key decision factors and assumptions

Introverted (in house) vs. Extroverted (public facing)

Homogeneous (consistent, well understood) vs. Heterogeneous (broad, covering information used for many purposes)

Disciplined vs. un/disciplined document creation environment

Mature (stable topics) vs. emerging (new and unknown)

Explicit (sample documents use terms) vs. Implicit (absence of document collections)

Generalist (no subject covered in depth) vs. Specialist (detailed coverage)
Communication

• Audience
  - Sponsors
  - Project Team
  - Stakeholders
  - Extended stakeholders

• Message
  - Purpose (What)
  - Beliefs (Why, Benefits)
  - How (Steps and Activities)
  - What is expected from audience (Involvement)
  - Status (where are we in process)
Governance Process

- Who will participate in maintenance
- Change management (how will changes be made)
- Ownership (who will insure internal consistency and lead maintenance over life of BCS)
BCS Design

- Best practices:
  - Ideal number - 15 top terms
  - Optimal Levels of Depth 3

- BCS Capacity versus Usability
Capacity vs. Usability

The ease of use is optimized here, and only improves with the use of facets. We must rely on familiarity to add increasing levels.
Gathering Existing Vocabularies and Organizing Tools

- Existing classifications
- Existing thesauri
- Existing navigation tools on intranet sites
- Organization charts
- Workflow diagrams
- File series inventories
- Data maps
Other Facets as Metadata

- Time/ Activity Cycles
- Space/Location/Geography
- People/Organizations/Audience
- Subject/Topics/ Domains
Functional Classification

- ISO 15489 endorse a functional approach to classifying records, which ensures that “records and their metadata descriptions accurately represent the business processes that created them”
- Functional classification is based on an analysis of the unique business functions and activities of an organization, but is independent of the organization's administrative structure.
Benefits to Functional Classification

- More flexible and stable as business units and divisions are likely to change over time
- Promotes effective information sharing in the organization, with the ‘ownership’ of files shared across different business units
How does this differ from Subject Classifications?

Subject-based Schemas
The focus is on what the item or object is about, rather than on the purpose or activity that the record was created to document. Therefore the context of the business activity can become imprecise and unclear, and will make implementing disposal actions over subject-based files more difficult as they will contain records with differing retention periods.
Functional Classification

Functional classification involves three levels of classification: function, sub-function, and activity.

• The term function is defined as:
  any high-level purpose, responsibility, task or activity which is assigned to the accountability agenda of an institution by legislation, policy or mandate; typically common administrative or operational functions of policy development and program and/or delivery of goods or services;

  a set or series of activities (broadly speaking a business process) which, when carried out according to a prescribed sequence, will result in an institution or individual producing the expected results in terms of the goods or services it is mandated or delegated to provide.

• Sub-functions are the parts of the business process mentioned in the third part of the above definition of a function (i.e., a step in the business process used to fulfill the function).

• Activities are the next level of the system, taking the form of actions or transactions.
Example

Finance Management Function
Management Business Process
(sub-functions)

Plan
Determining how financial resources will be used to achieve goals and objectives

Budget
Assigning financial resources to specific programs, activities, or initiatives

Measure
Assessing financial management performance

Manage, Control
Managing and controlling financial resources through the processes of accounting, reconciliation, quality assurance and reporting
Functional Classification - Activity Level

1.4.3.5 Finance Management – Management and Control – Accounting

Records related to the process of accounting for the use and disposition of financial resources, including records of transaction related activities such as classifying and recording of transactions against the Chart of Accounts and General Ledger, e.g., journal entries, invoices, accruals, reversals, payroll, as well as those of a monitoring and reporting nature, e.g., trial balances, closing statements, transaction summary reports, statements of financial operations

1.4.3-5-1- Accounting Standards
1.4.3-5-2- Accounting Methods
1.4.3-5-2-1 - Commitment Accounting
1.4.3-5-2-2 - Accrual Accounting
1.4.3-5-2-3- Cash Accounting
1.4.3-5-2-4- Cost Accounting
1.4.3-5-2-5- Account Verification
1.4.3-5-3- Accounts
1.4.3-5-3-1- Classification and Coding of Financial Transaction
1.4.3-5-3-2- Bank Accounts
1.4.3-5-3-3- Customer Accounts
Test Criteria / Basic Principles

1. Intuitive – users can predict which category holds the content they want by looking at the top level
2. Unambiguous – users do not have more than one obvious option or choice for where to place or find specific content, the number of difficult choices is minimized
3. Hospitable, durable – the vocabulary can accommodate new content without significant restructuring
4. Consistent and predictable – subcategories or subordination is logical and consistent across several levels
5. Relevant – vocabulary reflects users perspectives
6. Not redundant or no repetition of terms
7. Balanced – even level of depth across categories
Evaluate this against Test Criteria

1. Intuitive – 3/10
2. Unambiguous – 2/10
3. Hospitable, durable – 7/10
4. Consistent and predictable – 7/10
5. Relevant – 3/10
6. Not redundant or no repetition of terms – 5/10
7. Balanced – 7/10

Scorecard: 33/70 – 47%
Modified Functional

Simplify, Simplify, Simplify!
Modified Functional Approach

- Maintains the Function, sub-function, activity levels
- Allows for topical subjects or case files at lower levels (within activity)
- Utilizes thesaurus features to balance hierarchy (increase intuitiveness)
- Relates more closely to actual content rather than comprehensive life cycle process of sub-function (increase intuitiveness)
Example – Modified Functional Classification

FINANCIAL MANAGEMENT

This function relates to planning, controlling, preserving, developing and effectively utilizing the City's financial resources. Activities include accounts reconciliation, budget preparation and budgetary control, expenditure and accounts tracking, banking, and funds management. Also includes records relating to liability, risk management, payroll, taxation, insurance, and purchasing.

The primary goal of corporate financial management is to enhance corporate value while reducing the City's financial risks.

Activities:

- 37100 Accounting
- 37120 Accounting – Reporting - Daily
- 37160 Accounting – Reporting - Monthly
- 37180 Accounting – Reporting - Yearly
- 37200 Banking
- 37320 Budgeting
- 37320 Budgeting – Corporate
- 37360 Budgeting – Departmental
- 37600 Investment Management
- 37700 Procurement
- 37800 Property Assessment
- 37900 Risk Management
Other Modifications

- Introduce Thesaurus relationships and hierarchical features (BT, NT, Use, Use For)
- Add facets, metadata, categories
- Determine names of the relationships
Examples of Modifications

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Reciprocal</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>UF</td>
<td>Used For</td>
<td>USE</td>
<td>Equivalence</td>
</tr>
<tr>
<td>USE</td>
<td>Use</td>
<td>UF</td>
<td>Equivalence</td>
</tr>
<tr>
<td>BT</td>
<td>Broader Term</td>
<td>NT</td>
<td>Hierarchical</td>
</tr>
<tr>
<td>NT</td>
<td>Narrower Term</td>
<td>BT</td>
<td>Hierarchical</td>
</tr>
<tr>
<td>RT</td>
<td>Related Term</td>
<td>RT</td>
<td>Associative</td>
</tr>
<tr>
<td>SN</td>
<td>Scope Note</td>
<td>-</td>
<td>Note</td>
</tr>
<tr>
<td>PIB</td>
<td>Personal Information Bank</td>
<td>-</td>
<td>Category</td>
</tr>
<tr>
<td>SC</td>
<td>Subject Category</td>
<td>-</td>
<td>Category</td>
</tr>
</tbody>
</table>
Broader Term/Narrower Term

- Term A is a broader term to term B (and term B is a narrower term to term A) if all the things included in the class named by term B are included in the class named by term A.
Broader Term/Narrower Term

For example, "ANIMALS" is a broader term to "CATS" (and "CATS" is a narrower term to "ANIMALS") because all cats are animals.
On the other hand, "PETS" is not a broader term to "CATS" because not all cats are pets.
Related Terms

- Pets
  - RT Cat Food
  - NT Cats
  - NT Dogs
- Cat Food
  - RT Pets
  - RT Cats
- Cats
  - BT Pets
Preferred Terms/Non-Preferred Terms

- **Accounting (BT)**
  - Accounts Receivable (NT)
    - Customer Invoices (PT)
    - Invoices (NP/Use Customer Invoices)
    - Customer Number (RT)
  - Accounts Payable (NT)
    - AP Invoices (PT)
    - Vouchers (NP/Use AP Invoices)
    - Expenses (NP/Use Training Expenses or Travel Expenses)
    - Training Expenses (PT)
    - Travel Expenses (PT)

- **Transfer Funds (RT)**
Decisions to be made

- Functional versus modified functional
- Levels in hierarchy
- Format of description at each level
- Number and type of notes
- Relationships and name of relationships
- Facets, metadata
- Numbering scheme and format
- Relation to retention schedules
Questions
Resources

1. Stewart, Darin L Building Enterprise Taxonomies, 2008

2. White, Martin Making Search Work: Implementing Web, Intranet and Enterprise Search