The Business Value
of Taxonomy

EARLEY
INFORMATION SCIENCE

Business Taxonomy – A Foundation for Agility

Look at the most successful organizations, and what stands out is an ability to react quickly to changing markets, changing customer needs, and rapidly emerging competitive threats. This agility is the result of ensuring that business processes, workflows, and communications among business groups move freely. Business taxonomy is a foundation for efficiency, better collaboration, and improved information flows throughout the enterprise. It provides organizational concepts, content categorization, and data relationships that set an organization's pace for improving information organization, access, findability, and reuse. These improvements lead to reduced costs and increasing speed and precision for delivering services, solutions, or information, developing products, and conducting operations.

Business taxonomy continues to grow in importance to every aspect of the business. They are more than classification structures or navigational hierarchies. They are indispensable to the organization's ability to manage and fully exploit vast amounts of information produced during day-to-day operations. They are the foundation of critical capabilities and market differentiation in a fast changing

> *Business taxonomy is a foundation for efficiency and collaboration improvements*

ecosystem of competitors, customers, partners, suppliers, and evolving/emerging tools and technologies. They are foundational to meeting the constantly growing demands of customers and employees:

- Customers demand the ability to find information easily, to quickly learn how products and services can help them and ways to solve problems by getting to the answers they need without endlessly searching and scrolling.

- They have higher expectations about a streamlined experience – the customer experience is made of or driven entirely by information and the better that information aligns with their way of thinking, the more satisfying the experience.

- Managers need quickfast, consolidated access to accurate and reliable information to respond quickly to market changes.do their jobs effectively.

- Employees want to spend less time creating, checking or validating information accuracy and recreating "lost" documents.more time on higher value creative activities. One person's output is another's input and not being able to quickly access what they need slows down all downstream processes.
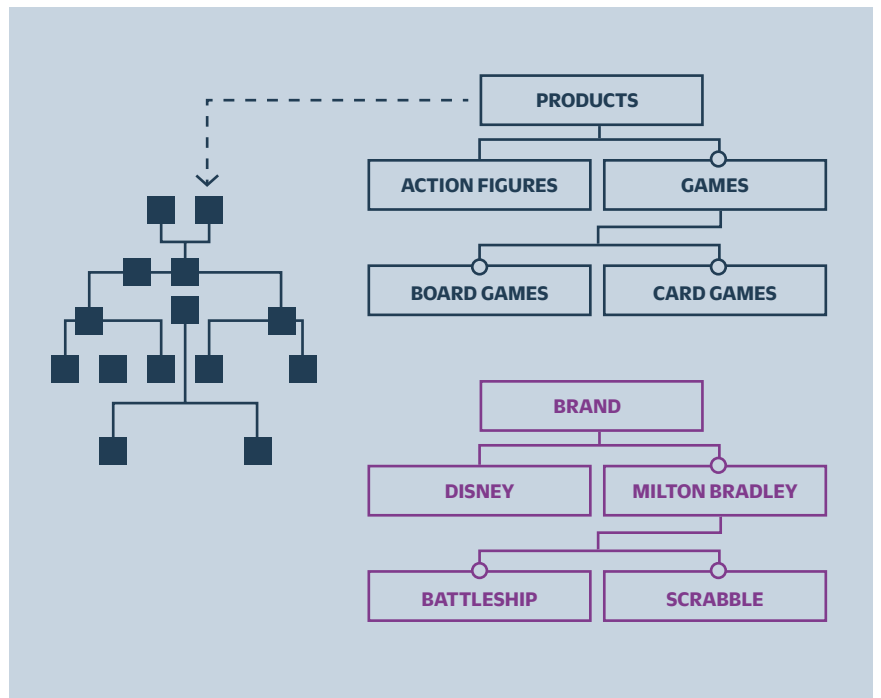
Real World Uses of Taxonomy

- Applied Materials uses taxonomy to integrate multiple information sources for field service reps that reduced the tiem spent searching for information by 50% resulting in $50mm in annual savings.

- Allstate's intelligent virtual assistant leverages taxonomy and componentized content to provide knowledge access for underwriters and agents resulting in reduced call center volume and improved customer service.

- A big box retailer uses taxonomy to automate product onboarding by mapping supplier data to internal item master standards.

- Global manufacturers like 3M use taxonomy to improve channel syndication of product informaton to distributors and increase search precision

and recall leading to increased revenue.

- Aetna uses taxonomy to break large policy documents into more readily accessible pieces to answer specific questions about coverage and reimbursement improving contact center efficiencies and improving customer satisfaction

- A large hardware manufacturuer uses taxonomy and information architecture to syndicate "publish once and use everywhere" content for marketing, customer support, call center operations, channel partners and even content embedded in products to improve content operations efficiencies saving hundreds of millions of dollars per year.

6 Ways to Use Business Taxonomy

1. **Resolve differences in terminology**

2. **Inform navigation and optimize search**

3. **Populate metadata field values**

4. **Automated processes and communications**

5. **Improve the e-commerce user experience**

6. **Extend Business Intelligence (BI) and analytics reporting**

The Many Faces of Taxonomy

How should organizations approach taxonomy? The value proposition of business taxonomy is realized when its multiple roles are developed:

- To structure and manage critical business concepts and vocabularies

- To deliver content assets to customers and consuming applications

- To act as a source of truth when integrating different systems and applications

- To underpin the "knowledge scaffolding" of the enterprise by building taxonomies for multiple applications and domains.

There are numerous domains in which taxonomy plays a role including product information structures, customer data models, marketing and web site content management, knowledge architecture for cognitive systems like chatbots and virtual assistants, search thesaurus structures, business intelligence systems, and customer relationship management tools. Virtually every internal and external system and technology that the organization runs on is impacted by taxonomy.

Taxonomy is a system for storing and organizing terms that represent an organization's critical concepts, such as product groups, content types, roles and personas, and knowledge topics.

Business taxonomy consists of term names and labels that are specific to an organization's information and unique to how that business operates. These terms are associated with business assets like documents, initiatives, and people to define and describe them consistently. Within the taxonomy, these term names are managed using relationships: hierarchical or parent-child relationships (e.g. furnishings and chairs), equivalent or near-synonymous relationships (e.g. furnishings and interior decorations), and associative relationships (e.g. furnishings and design styles). They are organized generally as a tree-like structure with branches reaching out to sub-categories, while the equivalent terms are grouped to provide flexibility in naming things.

A developed taxonomy is a valuable authoritative source for the organization. It will improve content organization, accessibility, reuse, and findability. Taxonomy-driven improvements lead to reduced costs for delivering services, developing products, and conducting operations.

Since taxonomy is a classification system, there are always multiple taxonomies fine tuned for the specific "domain" – for human resources, the taxonomies might include job roles, titles, skills, qualifications, training topics, educational levels and degress, certificaitons and so on. For a finance organization, taxonomies can be represented by charts of accounts, business entities, expese categories, tax topics

and more. In life sciences, there can be taxonomies for diseases, indications, treatments drug classes, generic compounds, mechanisms of action, drug targets, research topics, chemical entities, brand names and more.

Some organizations say "sounds great – where can I buy one?" The challenge is that each organization is different and their proceses and terminology will be different even if they are in the same sector and sell similar products to the same customers.

That's not to say there are not similarities and many standards exist to help with efficiencies such as when dealing with trading partners or exchanging data. But there is no one size fits

all and its important that your taxonomies help to differentiate the customer experience so that you can stand out from the competition. Standardization is for efficiency. Differentiation provides competitive advangage. Consider that the next time you go to your favorite grocery store or retailer compared with another brand of store that you don't like as much. One is more suited to your style, preferences and way of shopping. That is the differentiation that taxonomy can provide for online experiences.

Six Ways to Use Business Taxonomy

1. RESOLVE DIFFERENCES IN TERMINOLOGY

Many organizations have problems with terminology and vocabulary; companies inherit different vocabularies through mergers and partnerships, for example. Different customer groups use different naming conventions. Different business areas use different vocabularies. Taxonomy's core function is resolving terminology and vocabulary differences. Taxonomy provides a standard vocabulary for use across all business functions, content, and customer groups, leading to improved information consistency, better analytics, and smarter business processes.

2. INFORM NAVIGATION AND OPTIMIZE SEARCH

Managing concept and term relationships enables "findability," another core function of taxonomy. Search results are more relevant and accurate when search engines ingest taxonomy terms, and when users can select taxonomic terms to fine-tune their queries. The broad-to-narrow organization of terms drives both navigation and search in websites and intranets and team sites, enterprise content management (ECM) systems, digital asset management (DAM) systems, applications and mobile apps, and so on. Taxonomy relates documents and digital assets to these findability architectures, resulting in a consistent user experience across all platforms. For example, after a call center's website was organized using taxonomy, representatives—users of the website—reduced their time spent helping customers almost 50% because the search function was dramatically improved.

3. POPULATE METADATA FIELD VALUES

Tagging documents or digital assets incorrectly is a common problem that impacts findability and retrieval. Tagging accuracy is improved when restricted terms (i.e. controlled vocabularies) are stored in taxonomy. When taxonomy provides terms to the different consuming systems, organizations can maintain term consistency across the enterprise. For example, an organization's taxonomy could be the originating source for all "Industry" terms used within knowledge management, content management and digital asset management systems. If the business decides to change an element in the taxonomy— renaming Healthcare to Life Science, for example—the change need be made only to the taxonomy and not to each of the three content systems.

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6. EXTEND BUSINESS INTELLIGENCE (BI)

Many organizations have inconsistencies in the terms they use in their structured data. In the absence of an enterprise dictionary, there is no way to normalize the terms to establish equivalency. Consequently, traditional BI can't provide the "complete story" that would enable executives to make fully informed decisions. Taxonomy can extend BI by mapping database values to common concepts, so that BI analysis includes a fuller set of content. For example, a greeting card manufacturer could use its taxonomy to define glossy and coated as synonyms in order to ensure that sales reports aggregate results for cards with both attributes.

4. AUTOMATED PROCESSES AND COMMUNICATIONS

Chatbots and voice interfaces require controlled vocabularies, faceted logic, and conceptual relationships, which are precisely the ingredients of mature taxonomy. Taxonomy allows for the automation of targeted content delivery, analytics reports, and problem recognition, for question answering systems. Taxonomy driving the correct information architecture is a foundational element of text analytics tools that can automate the tagging of legacy content.

5. IMPROVE THE E-COMMERCE USER EXPERIENCE

Websites and mobile apps use taxonomy to present information in useful ways and to further optimize the user experience. For example, a toy store's taxonomy can be used to display all game box products on its website. Or it can display all game box accessories, or only those game boxes within a price range. Taxonomy empowers users to explore products and product content by providing clear choices for browsing and accurate results for search.

Business Taxonomy Best Practices

...create a plan for tagging that can be used across the enterprise to improve the user experience for customers and employees alike.

1. Define a clear path to getting value from your taxonomy. Don't risk creating shelfware with abstract or technology-centric approaches. Start by identifying organizational needs based on use cases, scenarios and metrics baselines for key processes. The taxonomy should improve information needed to drive those processes and improve on baseline metrics scores.

2. Make sure the project team includes perspectives from all business and supporting process stakeholders: process owners, content contributors, consumers and end users, subject matter experts and influencers, and system owners, as well as the taxonomy stewards themselves.

3. Have an approach for connecting taxonomy to your assets. First, make sure that your information systems are connected where possible to the same central taxonomy. Then, create a plan for tagging that can be used across the enterprise to improve the user experience for customers and employees alike.

4. Develop a governance process to maintain, update, and sustain the taxonomy. Taxonomy needs to keep pace with business growth and change, so assign stewardship responsibilities with change in mind. Building data driven decision making into your governance will ensure that changes are improving processes and not negatively impacting them.

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Conclusion

Organizations increasingly need to access, reuse, and locate content across different information systems, business applications, and mobile devices. Their hope is that technology is the key solution. However, information issues are not just an IT problem. IT cannot fix the business but instead enable the information that empowers the business - business unit buy-in and support is essential. Various groups use different terminology, impacting the ability to share data between business processes. Everyone is a creator of information, resulting in too many sets of inconsistent organizing principles. An enterprise approach to organizing information based on a holistic view of taxonomy will speed knowledge and data flows throughout the organization leading to greater efficiencies and faster, better quality decisions.

Technology-centric solutions aren't solving the problem. Taxonomy addresses content, knowledge and data accessibility, reuse, and findability issues head-on. With this foundation in place, organizations can be prepared for changing markets, customer needs and competitive threats, and will be able to respond in an efficient, agile manner, reducing time to market and increasing their competitive advantage.

About Earley Information Science

Earley Information Science is a professional services firm dedicated to helping organizations just like yours become an AI-powered, customer-driven enterprise. We have the tools, team, and processes to design and execute a scalable, governance-driven digital roadmap, led by your customer's immediate and long-term needs. Together, we can implement a digital transformation that provides a personalized, accurate, and fulfilling customer journey, driving measurable ROI to your bottom line.

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