

Content Agility for Legal Information Services – A perspective and TCS Offerings

Legal Information Service providers, now, are more pressed than ever to process larger data sets and provide timely actionable knowledge through multiple delivery channels. The providers using product-centric content strategy and legacy content management systems are not being able to maximize the value of their content. To cater to the growing needs of knowledge-driven legal professionals, service providers need to move to a content-centric strategy and introduce agility in managing their IT systems. This paper presents an overview of the challenges faced by the Legal Information Service providers and the TCS Content Agility roadmap for transforming their IT systems to meet the current market needs and emerging demands.

About the Author

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Introduction

Prior to the advent of electronic research, for rendering legal advice, the sole source of knowledge was physical documents. Lawyers and their staff used to spend a considerable part of their time in researching physical legal documents to get the relevant references to build cases. Librarians and law students used to spend considerable time in the library to locate the desired information. Since the legal profession is knowledge-driven and the knowledge requires frequent updating with the continuous changes in legislation, rules and verdicts of the courts, locating the right information was time consuming and costly.

The Internet age has certainly made it easier and less time consuming to locate the relevant cases, statutes, references to treatises, law articles and other relevant references. But with an ever-increasing number of data sources, explosive data growth and lack of universal citation standard, the Legal Information Service Providers face a significant challenge in maintaining coverage, depth and relevance of content. It is therefore imperative for Legal Information Service providers to deliver the services across multiple delivery channels with more speed, accuracy and effectiveness. Legal Information Service Providers have to move from traditional product-centric approaches to efficient content-centric approaches to address the challenges that legal professionals face. Content Agility is the change agent for transformation in an expeditious and efficient manner.

Content Challenges for Legal Information Services

Legal Information Service providers are faced with the enormous challenge of managing legal content complexity and ensure that they are able to provide the legal fraternity with the latest updated knowledge database and value-added tools required to do their job systemically. The challenges can be broadly classified under following five categories:

1. Data Explosion – Need to exploit growing content volume

Legal information service providers need to ensure that they have maximum coverage of both current and historical content from primary and secondary information sources – like Federal/State Caselaws, supporting documents (briefs, motions, pleading), statutes, topical laws/treatise, published books/journals, articles, editorials, law reviews, news, blog contents, and so on. These have to be acquired from a variety of sources – courts, court websites, reporters, public domain, law firms, law publishers, legal magazines and newswires. The content formats are also diverse – paper documents/books, multiple document formats (word, pdf, images, text, and so on), new media content (audio/ video), websites/ user generated content (HTTP, RSS, XML and so on), archived content (tapes/microfiche/microfilm). The growth of data is creating a data explosion which needs to be well managed by a streamlined content acquisition strategy and a scalable content management system.

2. Data Accessibility – Need efficient ways to find and research

Users need to find the relevant legal information in the form of cases/documents quickly to build an understanding for their clients. The keyword/full-text search fetches plenty of leads but a large amount of unfiltered material has also to be reviewed. The vastness of data makes it difficult to find the relevant content quickly if the database does not have a comprehensive metadata, content properly categorised and linked. Topical classifications and citations provide a quick way to navigate to referenced cases and artifacts. Legal Information Service providers need to implement a systemic way to categorise, link and cite contents. Metadata search needs to be augmented with semantic search using personalised contextual data. Algorithms and analytics need to be provided to help uncover the hidden meaning of data, which otherwise would be difficult to discover.

3. Data Accuracy – Information Reliability is the key

Legal material is referred in courts of law and hence needs to be accurate. In the print world, the content published is usually reviewed by the author and the publisher. The publisher's reliability is associated with content quality and accuracy. Online providers need to maintain high accuracy (desirable >99.99%) and ensure that the data has not been corrupted or altered during conversions. Abundance of data, unstructured text and absence of high accuracy OCR tools leads to data extraction/conversion errors. If delivered without proper reviews, the faith in the data is lost. Legal Information Service providers have to creatively address the challenge by using a combination of automated solutions, quality tools and expert reviews.

4. Product-Centric Content Strategy – Data in silos

The business demands that newer products be created quickly to differentiate from competition and reach new markets. The Legal Information Services industry has grown by mergers/acquisitions and effective integration was not done in most cases. As a result the companies have multiple products with similar and partly duplicated content in non-cohesive structures. This limits content sharing among products and makes it expensive to ensure that updates are consistent across product-lines, resulting in higher cost of ownership. It is also difficult to ensure that content from multiple existing products are leveraged for new products. IT systems needs to be transformed from a product-centric strategy to content-centric strategy to be able to re-purpose/leverage existing content and create newer products quickly.

5. New Data Delivery Channels – Information anytime, anywhere

Legal professionals are demanding that information be provided through the device of their choice – blackberry, iPhone, PDAs – so that they can access the content from anywhere, anytime. Information services providers need to ensure that they are able to leverage their existing content and push them quickly through multiple channels. Each delivery channel has its unique data display format and it is important that the content should be easily re-purposed from one format to another. With media convergence and social networking, the information should be consistent across multiple channels.

Content Agility

Content Agility is the solution for the content challenges faced by the information providers. Broadly, it can be defined as a state that allows the content:

- to be loaded from any source and any format
- to be stored in a repository maintaining the inherent content structure (as XML)
- to be transformed, enriched, identified and analyzed quickly
- to be delivered in any format through any delivery channels

Content Agility will allow the Legal Information Service providers to deliver agile solutions with agile business processes to meet market demands. It will allow them to provide innovative products for their customers and maximize content monetization.

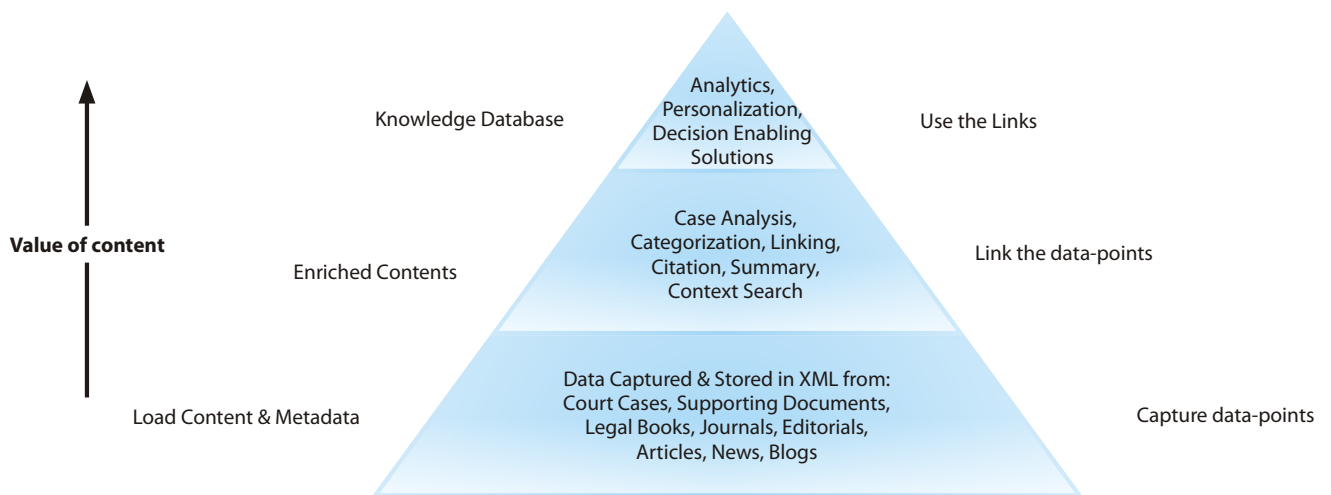
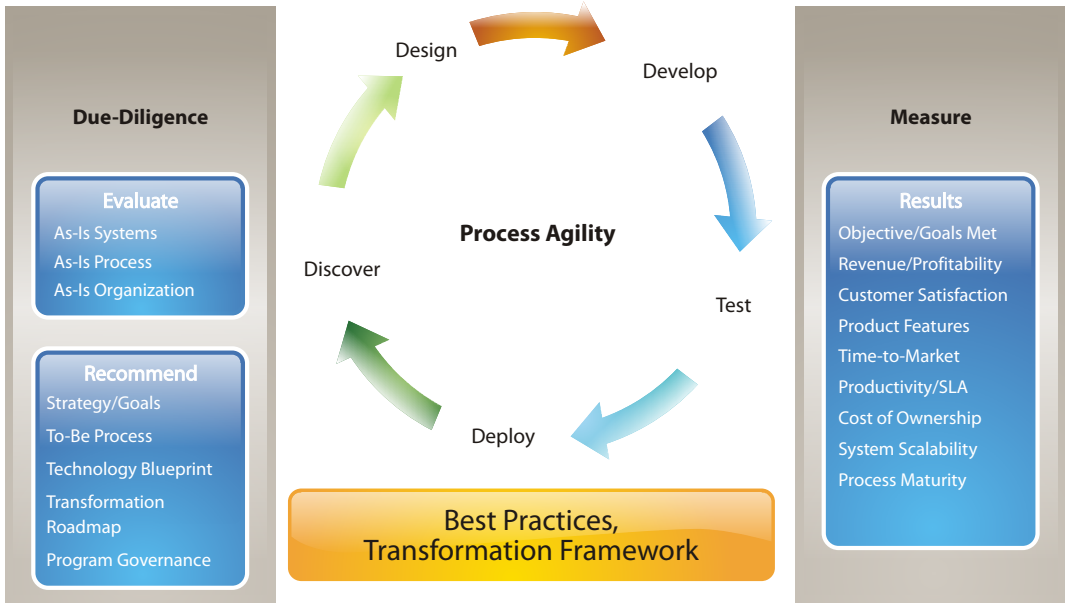


Figure 1 : Content Value Hierarchy

TCS Content Agility Transformation Roadmap

TCS Content Agility transformation starts with a Due-Diligence Study to ascertain where the Legal Information Service provider stands with respect to its current content operation, processes and to create a transformation roadmap on how to reach the goals. The products and tools in the market are evaluated to ensure that the advancement of technology is leveraged and the business gets the maximum return on investment. The processes are reviewed against industry best practices for improvement and agility. TCS has a framework and assets in the form of Best Practices/Templates/Checklists to evaluate and measure the transformation quantitatively.



TCS Content Agility Framework

With TCS's rich experience in providing content solutions for Publishing and Information Services industry and legal domain knowledge, we have created a framework for Legal Information services companies to achieve Content Agility.

A simplified conceptual framework for achieving Content Agility for legal Information service provider is represented in the following diagram.

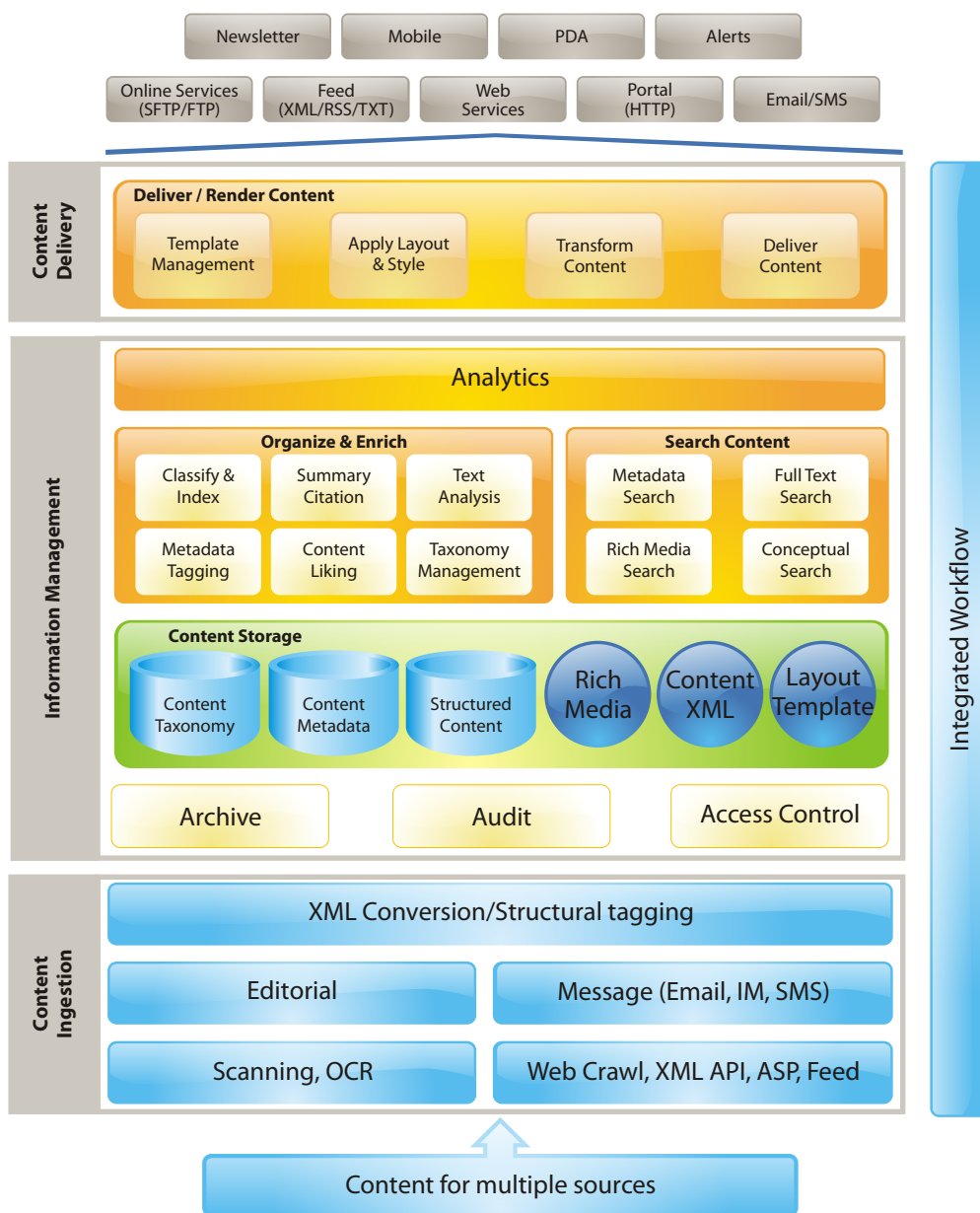


Figure 3: Content Agility Reference Architecture

TCS provides end-to-end offerings for Content Agility driven by Transformation Consulting, Digitisation, Content BPO/KPO/LPO and IT applications implementation. In addition to people and process capabilities, TCS has key content assets/frameworks and it leverages industry standard products from its alliances like Marklogic to design the transformational platform.

1. **Exegenix®** – Automated Content conversion from both structured and unstructured data in pdf/word/html to XML.
2. **CMCDocs** – Integrated Workflow with inbuilt modules for legal taxonomy and configurable rules for legal industry. Integrated with Citation XML Editor and OCR/Scanning interfaces.
3. **Legal Text Mining** – Framework and components developed by TCS Innovation Labs for automated semantic linking, categorisation and legal ontology.

Content Agility Transformation		
Area	Key Activities	TCS Enablers
Strategy	Create Business Case, Technology Blueprinting, Roadmap Definition,	Global Consulting Practice & Domain Consulting
Execution	IT Governance , Program Management, Change Management	Global Consulting Practice
Innovation	Joint Solution Incubation, Co-Innovation	TCS Solution Labs, Co-Innovation Network (COIN™)

Legal Content Ingestion & XML Conversion		
Source	Key Activities	TCS Enablers
Paper Documents: Caselaw, Supporting Docs, Published Books, Journals	Scanning, Double-Keying, OCR, Proof-Reading/Editing, DTD Definition, Metadata Extraction, XML conversion,	Digitisation, Content BPO, Exegenix, CMCDocs Workflow with Integrated OCR & lexical taxonomy
Audio: Court Recordings, Conference Calls	Legal Transcription, Audio Recordings, Metadata Extraction, XML conversion	Content BPO, T-CMCDocs
Web: Court Websites, Public Domain Websites, Legal Blogs websites	Web-crawling, Metadata Extraction, XML conversion	Content BPO, Automated web data extraction with 3rd party web-crawlers
Feeds: Syndicated Data, Legal Info from Law Firms, Info Service Providers	Data Load, XML Conversion , Metadata Extraction	Exegenix®, CMCDocs
Archived Legal data: In Microfiche, Microfilm	Scanning, Double-Keying, OCR,	Digitisation, Content BPO, Exegenix, CMCDocs Workflow with Integrated OCR & lexical taxonomy
Newswires	Metadata Extraction, XML conversion Metadata Extraction XML conversion, Newsfeed Integration	Exegenix, Custom Application Dev.
Legal Content Authoring: Editors/Journalists	Editorial System with XML conversion & Metadata Extraction	Custom Application, Off-the-shelf Editorial systems implementation
Existing Data Conversion	XML Conversion, DTD conformance, Data mapping	Exegenix®, Business Intelligence Offerings

Legal Content Management		
Area	Key Activities	TCS Enablers
Content Storage	XML Content Store, Data Load	Marklogic Implementation, Enterprise Content Management Systems Implementation, SIGMARK framework
Content Fabrication	Prepare Legal Taxonomy, Citation, Semantic Tagging, Categorisation, Linking	Content BPO, CMCDocs, TCS Text Mining Solution for auto categorisation, semantic tagging.
Content Enrichment	Case Analysis, Prepare Case Summary, Reviews	TCS LPO – Legal Research (well versed with US/UK laws)
Search	Search Engine Implementation, Tuning, Optimisation	Industry standard Search Product, Custom Search Algorithm Implementation
Analytics	Business Analytics, Web Analytics, Compliance analytics, Risk analytics	Text Mining, TCS Business Intelligence Offerings- BIDS Framework
Integrated Workflow	Process Management, SLA Management, Performance Dashboard	CMCDocs

Content Delivery		
Channels	Key Activities	TCS Enablers
Web Delivery: Portal, newsletter, Alerts, Web Interfaces, RSS feeds , Realtime Delivery, Social collaboration	Portal Implementation/ Interface Dev, Web-services, RSS Feed Creation, Real Time Messaging Systems, Social Colloboration framework	IT Services – Web Development, Messaging System, Web2.0 offerings
Mobile/PDA Delivery: micro-portal, SMS, eBooks/Epublishing	Mobile Portal, eBook creation, Mobility Device Integration/Testing	IT Services - TCS Mobility Offerings, PIM2R framework

Conclusion

Content is King. Legal Information Service providers need to ensure that they are able to make the most of their content by extracting actionable knowledge from it and quickly delivering it across channels. They need to ensure that their IT Systems and processes do not become a bottleneck. Content Agility will help them transform their entire content value chain - from content acquisition to content monetization. It will help drive technology led business innovation and create an agile business process to quickly address the market needs. Given the business importance, most information services companies have initiated or have immediate plans to transform their content processes and systems. TCS has been associated with some leading Information Service providers in their transformation journey. The TCS Content Agility framework is helping them achieve their business objectives with the delivery certainty from TCS.

Acknowledgements

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About Tata Consultancy Services (TCS)

Tata Consultancy Services is an IT services, business solutions and outsourcing organization that delivers real results to global businesses, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled services delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development.

A part of the Tata Group, India's largest industrial conglomerate, TCS has over 143,000 of the world's best trained IT consultants in 42 countries. The company generated consolidated revenues of US \$6 billion for fiscal year ended 31 March 2009 and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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