

DITA Implementation Strategies

Managing Change

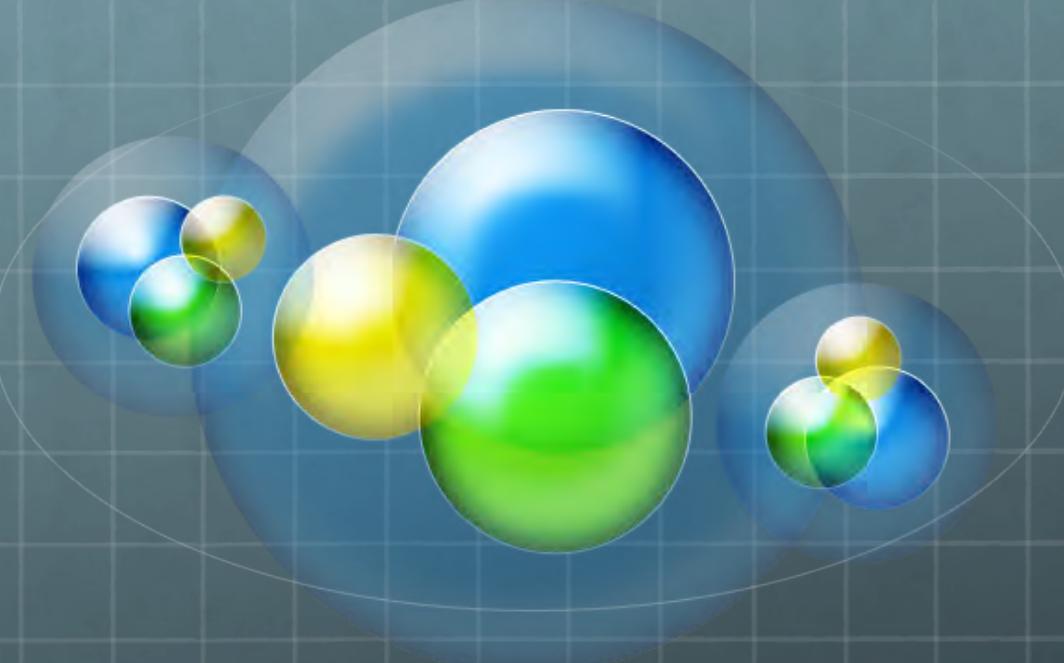
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Topics of Discussion

-  **Technical Publications**
-  **Vision and Goals**
-  **Adoption Challenges**
-  **Acceptance Factors**
-  **Planning**
-  **Enterprise Transition Strategy**
-  **Project Roadmap and Timelines**
-  **Roles and Team Organizations**
-  **Best Practices and Success Factors**

Technical Publications

- Produce user documentation for technical products
- Publishing to print and online help
- Deliver content in 6 languages
- Channel partner support
- 35 writers and editors in United States, working with over 200 writers worldwide

An abstract graphic is positioned in the upper half of the slide. It consists of several overlapping circles of different sizes and colors (blue, yellow, green) set against a light blue grid background. The circles overlap to create a sense of depth and interconnectedness.

Vision and Goals

**“To scale and provision content
dynamically in a cost effective way using
DITA XML in a component content
management system (CCMS)”**

Goals

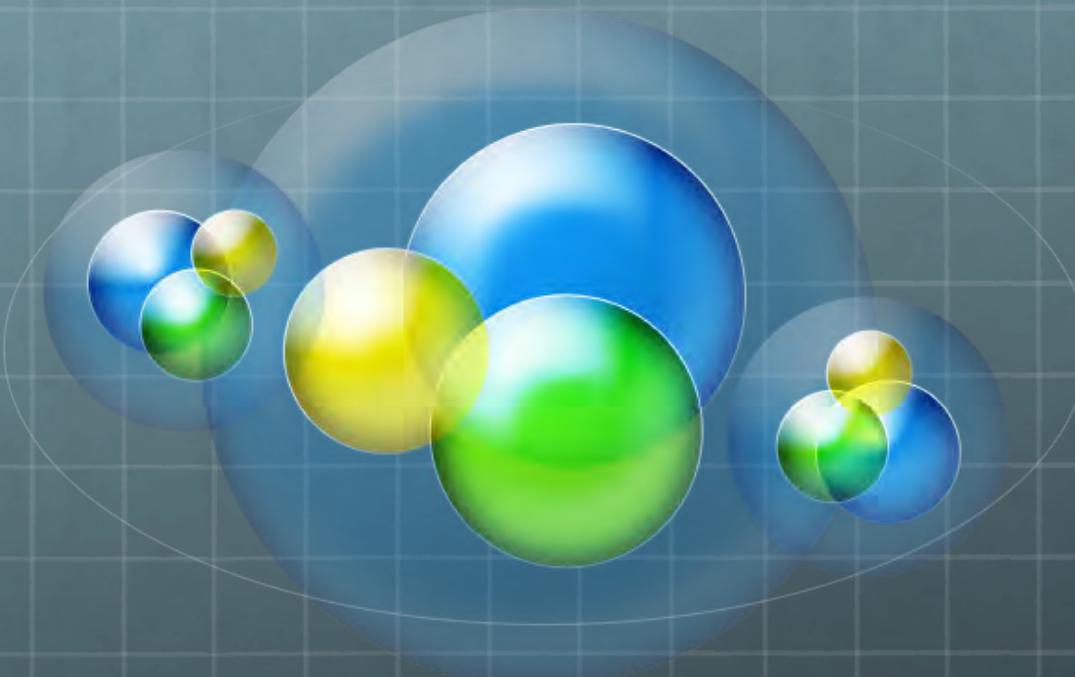
- **Reduce costs**
 - **Eliminate redundant content development costs**
 - **Reduce translation costs**
- **Support dynamic solution delivery**
 - **Support OEM requirements**
 - **Deliver cross-product consolidated deliverables**
- **Generate revenue**
 - **Share content with other revenue centers**
 - **Enable delivery of dynamic/personalized content**

Business Challenges and Change Drivers

- Loss of revenue due to delays in content delivery
- High costs of content creation, management, and delivery
- Issues in meeting Technical Publications department goals
- Productivity issues for authors
- High costs of maintaining in-house content development tools

Unified Content Development Strategy

- Unify technology across enterprise Technical Publications groups
- Simplify content creation, storage, access and control
- Implement a common information architecture (DITA)
- Share knowledge across departments
- Align with agile product development methodologies



Adoption Challenges

Content Development Challenges

- Inability to support business requirements for customized content delivery
- Inability to reduce costs of translation and content development
- Redundant content development and limited content reuse
- Complex workflows for single-sourcing
- Error-prone file management

Unique Challenges

- Language barrier and change resistance
- Adopting virtual collaboration methods
- DITA learning curve
- Parallel dual track content development
- Resource realignment challenges

Challenges for DITA CCMS Adoption

People

-  Topic-base structured authoring paradigm shift
-  Change management for writing teams and redefining roles

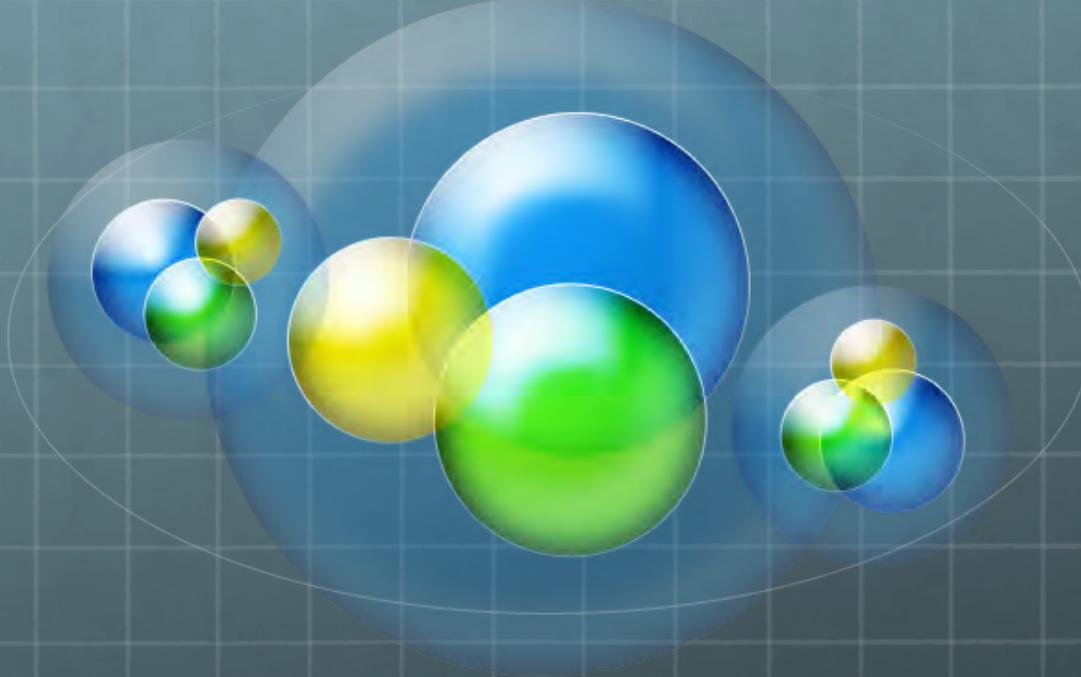
Processes

-  Multi-tasking resources supporting existing projects and DITA planning project
-  Communicating process changes to other stakeholders
-  DITA transition planning without impacting production content development

Challenges for DITA CCMS Adoption

- **Content**
 - Content migration challenges for different source formats
 - Parallel timelines for product content development and DITA migration

- **Technology**
 - Integrating new tools in diverse IT environments
 - Learning curve for XML authoring and content management



Acceptance Factors

Projected Business Benefits

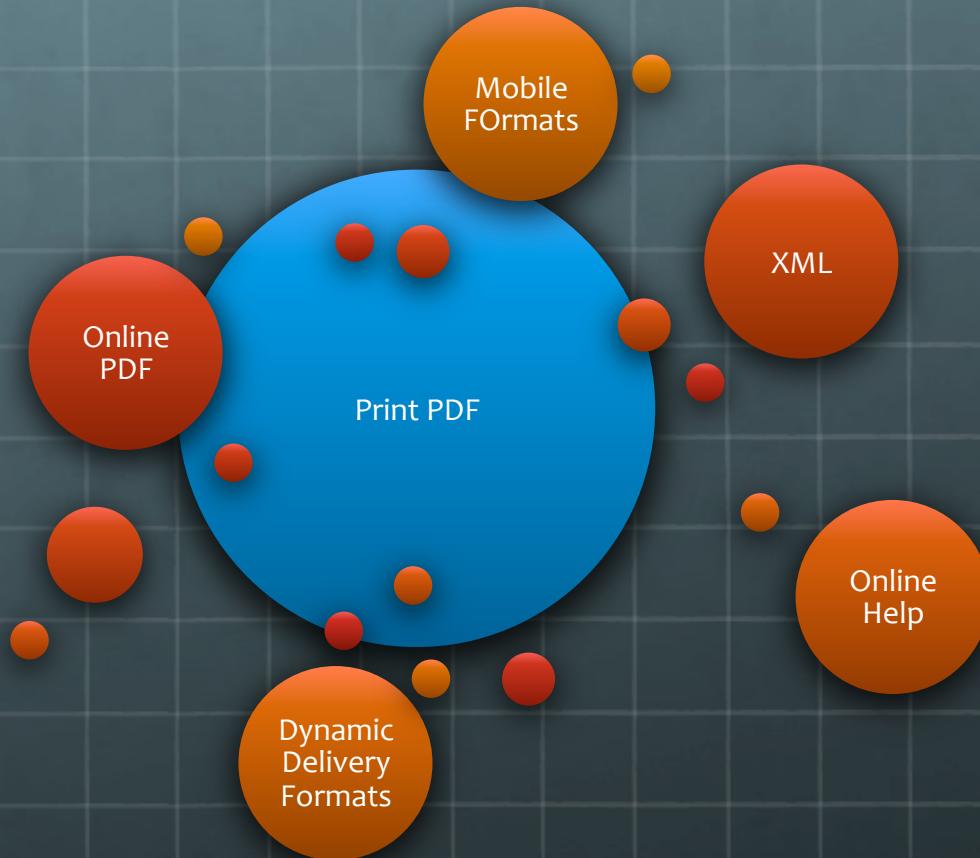
- Increase revenue from bridging globalization gap
- Competitive advantage from faster time to market
- Reduced content development costs
- Increased customer satisfaction
- Support multi-language authoring, storage, and publishing
- Support dynamic content delivery
- Support scalable product architecture and modular content

Potential Solutions

- 1. Adoption of DITA content development with a CCMS**
- 2. Adoption of DITA content development with a CMS**
- 3. Adoption of DITRA content development without CMS or CCMS**

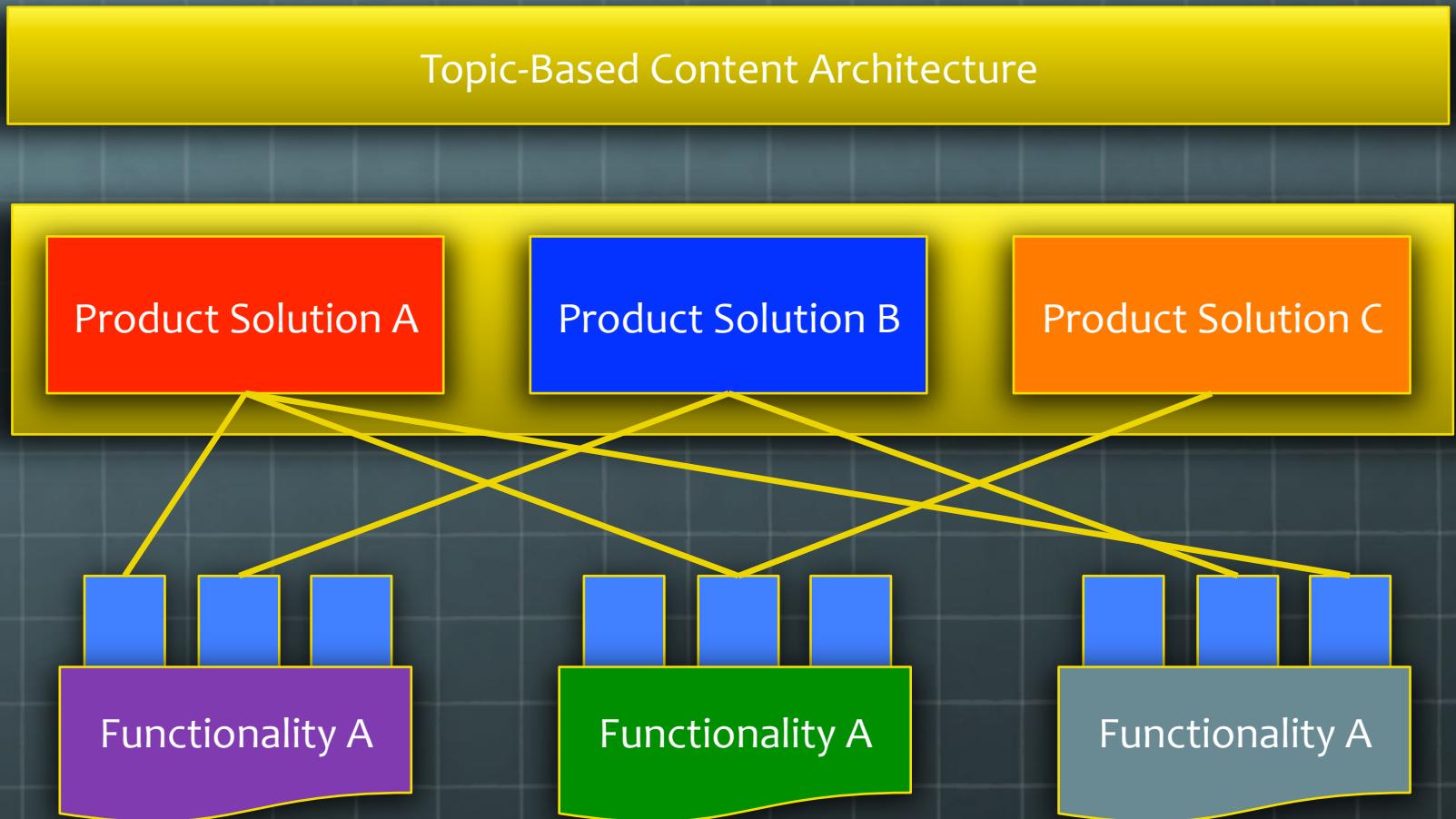
Unified Content Management Solution

Delivery Formats



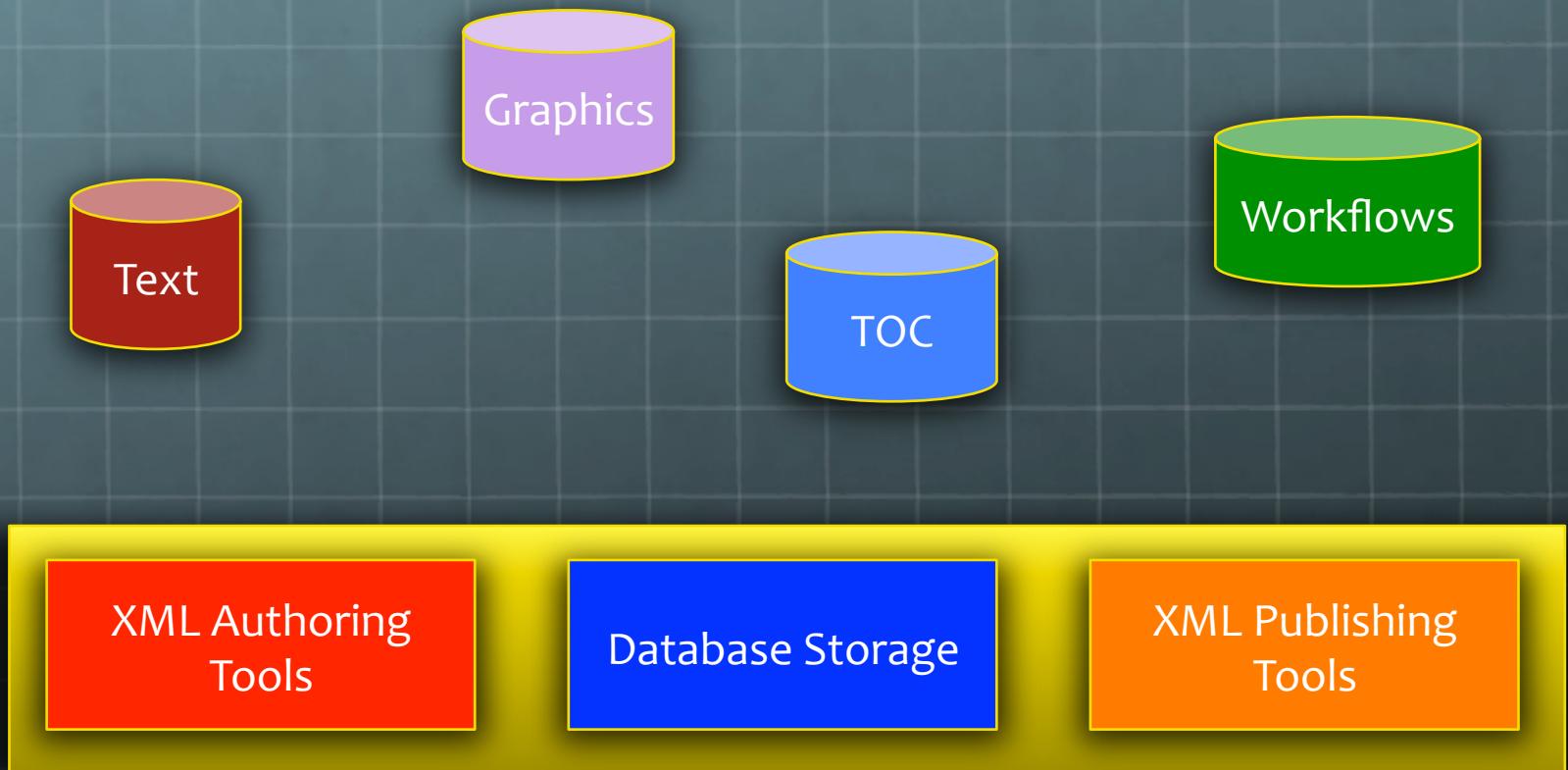
Unified Content Management Solution

DITA XML Architecture



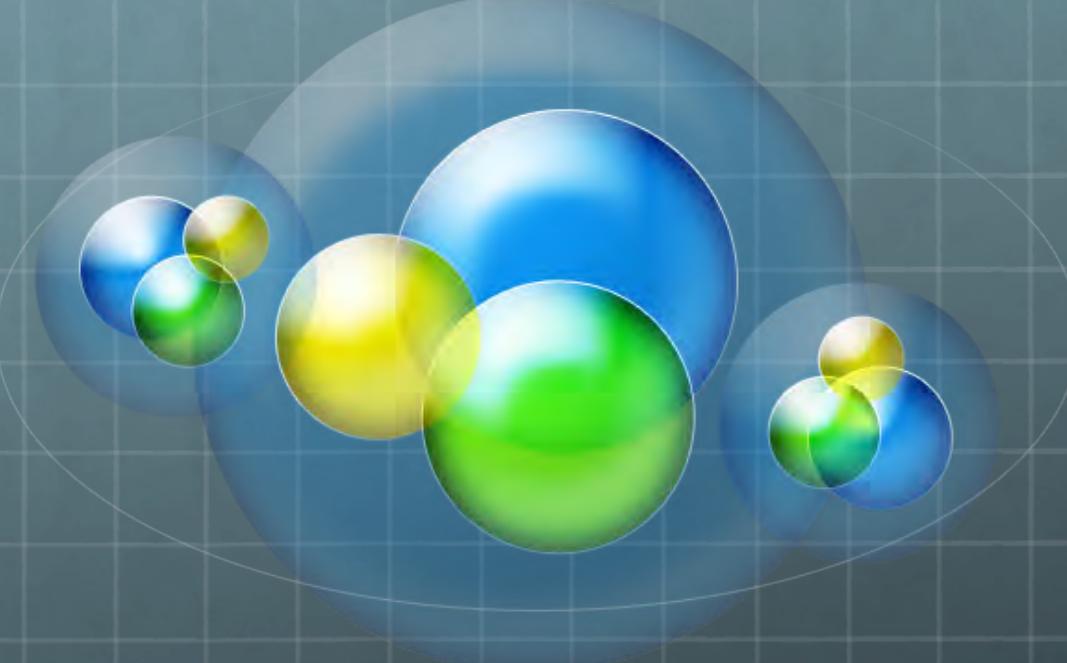
Unified Content Management Solution

Dynamic Storage Infrastructure (CCMS)



Selected Content Management Tools

- Just Systems Xmetal Author for XML Authoring
- SDL Trisoft for Component Content Management System



Funding and ROI

Funding Model

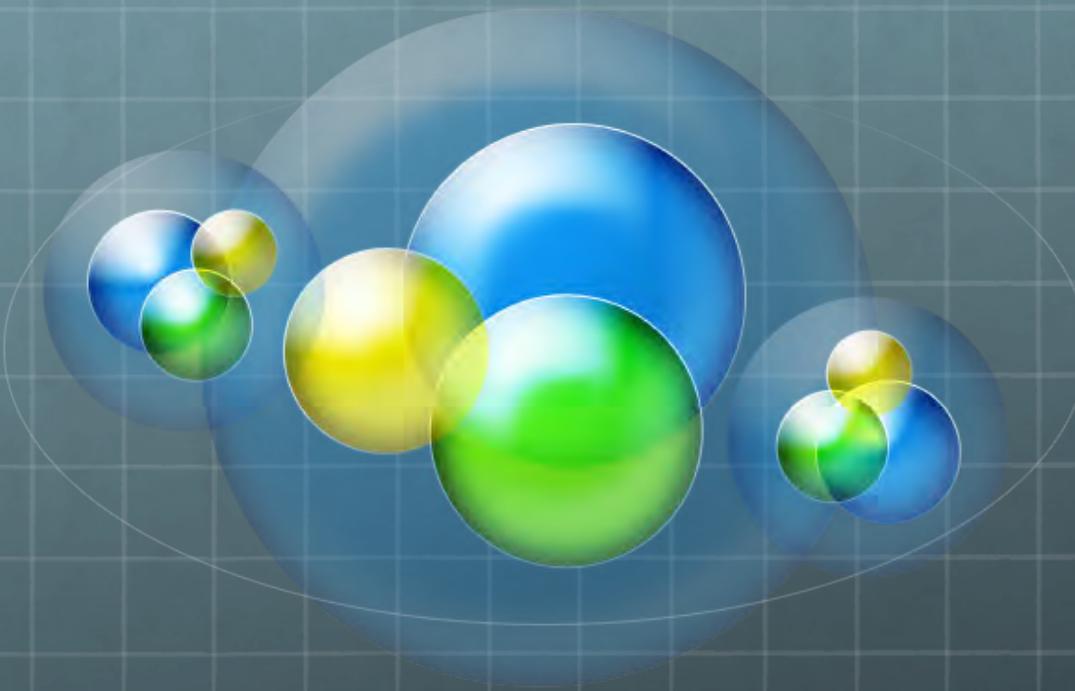
- Solutions-based funding model
- Cost impact by funding scenarios
- Detailed ROI breakdown workbook showing costs and savings
- Targeted customized computations for different stakeholders
- Hidden cost assessment for existing tools development and support
- Cost & benefit sharing model

Projected Savings and ROI Accumulation

Savings Categories	6 months	12 months	18 months
Create better Content Quality	✓	✓	✓
Provide Flexible Deliverables	✓	✓	✓
Support Agile Product Development	✓	✓	✓
Eliminate Redundant Content		✓	✓
Provide OEM Support		✓	✓
Reduce Processing Costs (Workflow Automation)		✓	✓
Reduce Translation Costs			✓

Funding Model

- Solutions-based funding model
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Global Transition Strategy

Planning for Transition Organization and People

- Strong commitment from senior management
- Peer groups shared common vision of value of DITA architecture
- Organization capable of acquiring funding for CMS
- Focus on collaboration
- Formation of intra-divisional global focus groups
- Reallocation of resources for DITA planning and pilot projects

Planning for Transition Content

- Focus on information structure and preparedness
- “Thinking in topics” while authoring in unstructured formats
- Transitioned to structured topic-based authoring
- Prepared content for migration
(content audit and analysis)
- Estimated transition tasks
(analysis, restructure, rewrite)

Planning for Transition Tools

- Existing XML tool development process evaluation
- Prioritization of issues for XML initiatives
- Software engineering practices for in-house tools development
- Streamlined tools requirements and change tracking process

Interim Content Development Strategy

- Developed content in existing development framework until DITA CMS implementation
- Avoided “DITA without CMS” migration path
- Focused on preparing content for DITA conversion in existing development framework
- Re-evaluated migration paths to DITA based on CMS purchase decision

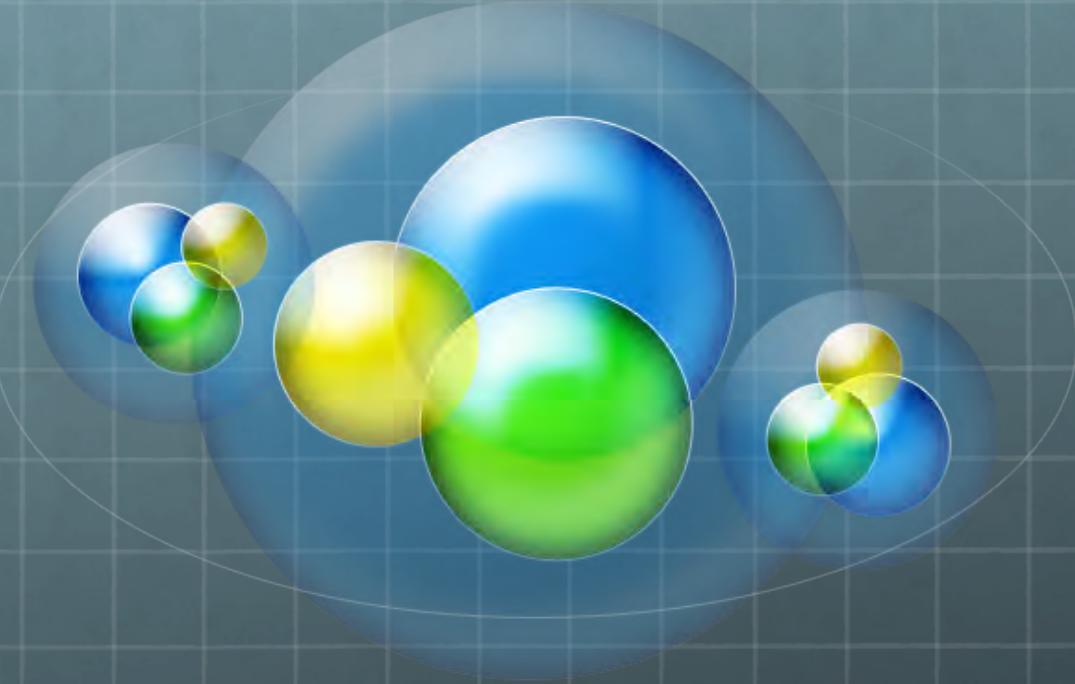
DITA Transition Phases

Phase	Content Model Transition Timeline	Authoring TimeLine	Skill Development Timeline
Content Analysis	Content Analysis (top-level and in-depth)	Author contents within existing content framework (Unstructured/Structured/Word/HTML)	Familiarize with structured authoring concepts and topic-based writing standards (web-based, hands-on training – topic based writing concepts, style and standards)
Content Restructuring	Content Restructuring within Existing Content Framework (using topic content structures)	Author new contents adhering to topic-model content structures but within existing content framework (topic/chapter based) Unstructured/Structured/Word/HTML	Familiarize with modular writing techniques and DITA topic based model (web-based, hands-on training – basic DITA training)
Pre-Conversion	Content re-write /pre-conversion clean up (using pre-conversion guidelines)	Author new contents adhering to topic-model content structures but within existing content framework (topic/chapter based) (unstructured/structured/word/html)	Familiarize with DITA topic-based authoring in XML editor and collaborative authoring using content repository (web-based, hands-on training – XML editor)

Content Conversion to DITA

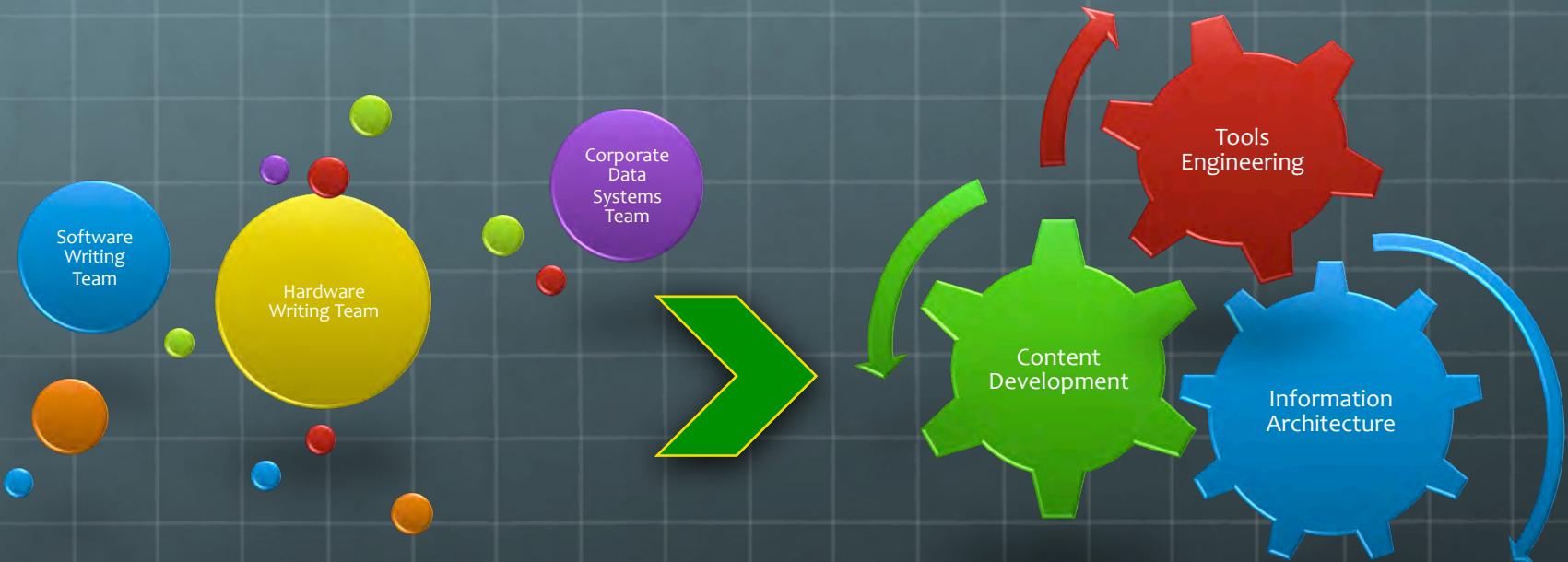
DITA Transition Phases

Phase	Content Model Transition Timeline	Authoring TimeLine	Skill Development Timeline
Content Conversion to DITA			
DITA Implementation	DITA Content Model Implementation (in XML files)	Author contents as individual topics adhering to DITA topic-model content templates in existing content repository (DITA XML)	Apply XML authoring skills in production environment. Familiarize with content management processes and workflows (web-based, hands-on training – CMS)
Content Restructuring	Content Rewrite / post-conversion cleanup (using post-conversion guidelines – XML files)	Author contents as individual topics adhering to DITA topic-model content templates in existing content repository (DITA XML)	Apply XML authoring skills in production environment. Familiarize with content management processes and workflows (web-based, hands-on training – CMS)
Content Migration to CMS			
DITA CMS Implantation	Content development in CMS (XML files and CMS)	Author contents as individual topics adhering to DITA topic-model content templates in CMS) (DITA XML CMS)	Apply XML authoring skills and CMS skills in production environment.



Roles and Team Organization

Initial & Target Virtual Team Structure



DITA Project Roles

Supporting the Author

Author

Localization Coordinator

Translator

User Experience Architect

Information Designer

Standards Developer/
Editor

Migration Project
Manager

Conversion Project Manager

CCM Project Manager

DITA CCM Project Manager

Conversion Specialist

Conversion Vendor

CCM Administrator

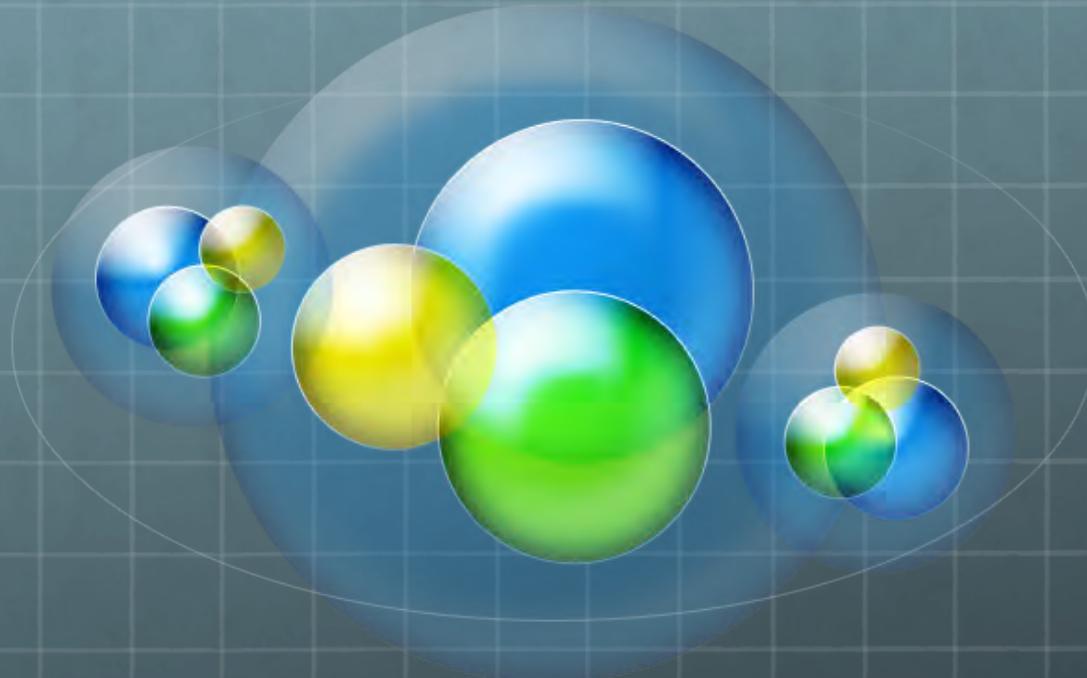
IT

Information Architect

Tool Engineer

Resourcing Strategy

- In-house resources for foundation roles
- Engage specialists to support initial implementation of DITA architecture and tools



Planning

DITA CMS Planning and Discovery Tasks

- Collaboratively developed prioritized requirements/use cases/workflows
- Collected existing content metrics through surveys
- Documented common XML and CCM tools evaluation criteria
- Conducted process and technology pilot projects for proof of concept
- Organized CCM vendor custom use-case based demos for evaluations
- Planned information architecture and tools development approach
- Defines content analysis and evaluation approach
- Researched deployment and content single sourcing scenarios
- Evaluated & selected XML authoring tool and CCMS
- Engaged IT during evaluation and selections

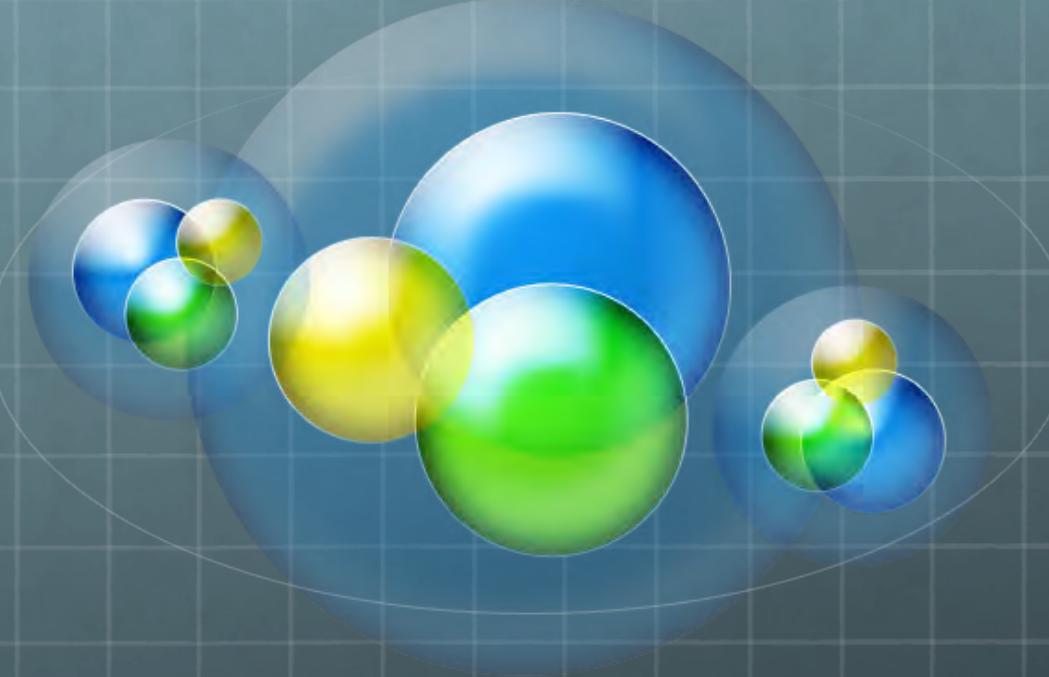
Technology Evaluation

- Developed CCM tools evaluation criteria collaboratively
- Custom demos to verify corporate content development use cases
- Vendor reference checks
- CMS evaluation project
- Tested by more than 20 writers and auditing members from various divisions including IT
- Participants testing authoring test cases, researching workflows
- Summarized observations and technology assessment

DITA Content Development

Sample POC Results

Current Process	Time Taken	DITA Process	Time Taken
Assemble chapters & deliverable books in FrameMaker	3 hours (20 chapters)	Assemble topics into deliverable maps in XML editor	10 minutes
Save Content to XML file	2 hours	Select style sheet for online output	< 30 seconds
Separate print and online contents using custom tool	< 1 minute	Generate online output	< 30 seconds
Validate XML contents in custom tool and correct errors	2 hours	Select style sheet for print output	< 5 minutes
Generate online help output	< 1 minute		
Apply product branding using custom tool	< 3 minutes		
Import print deliverable contents into FrameMaker	2 minutes		
Generate print output using custom PDF tools	5 minutes		
Total Time	7 hours/deliverable	Total Time	15 minutes/deliverable



Implementation Approach

CMS Environment

- ➊ Decided on single instance CMS deployment
- ➋ Iterative tools and transform development methodology
- ➌ Planned early for networking and connectivity from global locations
- ➍ Addressed tools integration issues early
- ➎ Continuous engagement with IT and other stakeholders

Style and Standards Development

- Created topic-oriented writing guidelines
- Gathered and validated existing standards information
- Researched deliverable requirements for DITA output
- Defined corporate DITA style and standards

Tools Engineering

- Iterative transform development approach
- In-house team acquired DITA OT and transform development skills
- Documented output specifications for DITA content
- Planned a prototyping approach to verify the effectiveness of DITA transforms
- Implemented a tools framework that is simple and easy to maintain in-house

Information Architecture Development

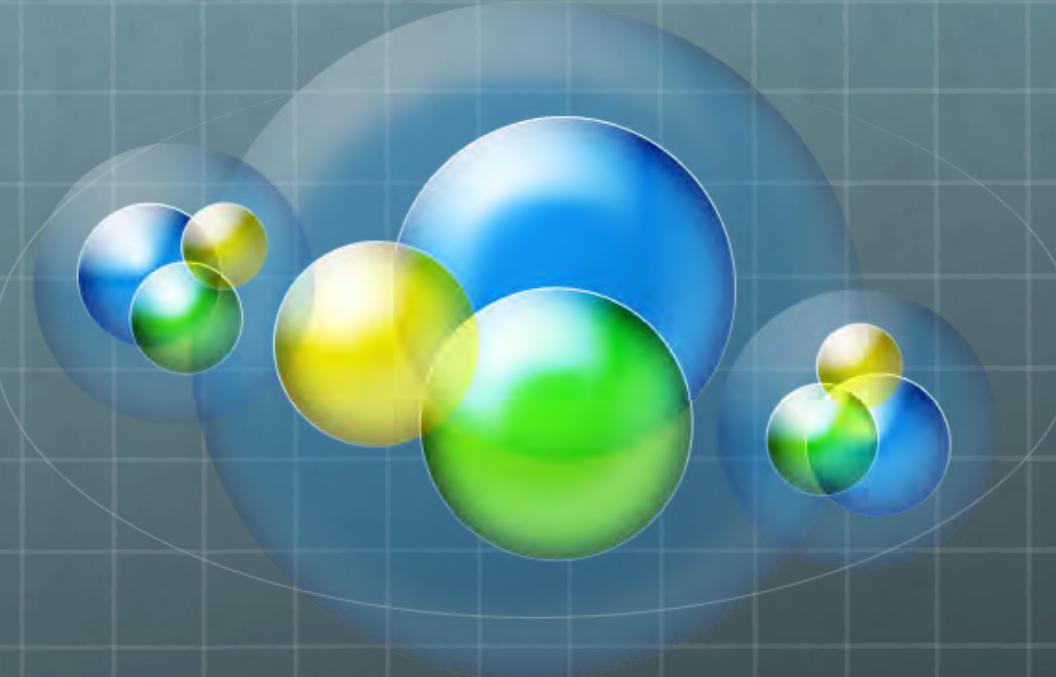
- Collaborative development of common DITA content model
- Co-ownership of DITA implementation deliverables
- Analyzed representative content samples
- Conduct information architecture workshops
- Iterative development of content model

Conversion and Migration Planning

- Evaluated DITA transition paths and conversion tools/ options
- Planned and conducted conversion process pilot
- Developed conversion specifications, process workflow and guidance in-house
- Developed content analysis and assessment template
- IA/Editing groups evaluated production pilot contents

Training

-  **Topic-Based Authoring**
-  **Integrated Content Development (ICDE)**
-  **In-House Webinar Series**
-  **Technical Publications Guidelines Library**



Project Roadmap and Schedule

DITA CMS

Project Phases

- Planning Phase
- Environment Design Phase
- Deployment Phase
- Production Phase

DITA/CCMS Transition Requirements

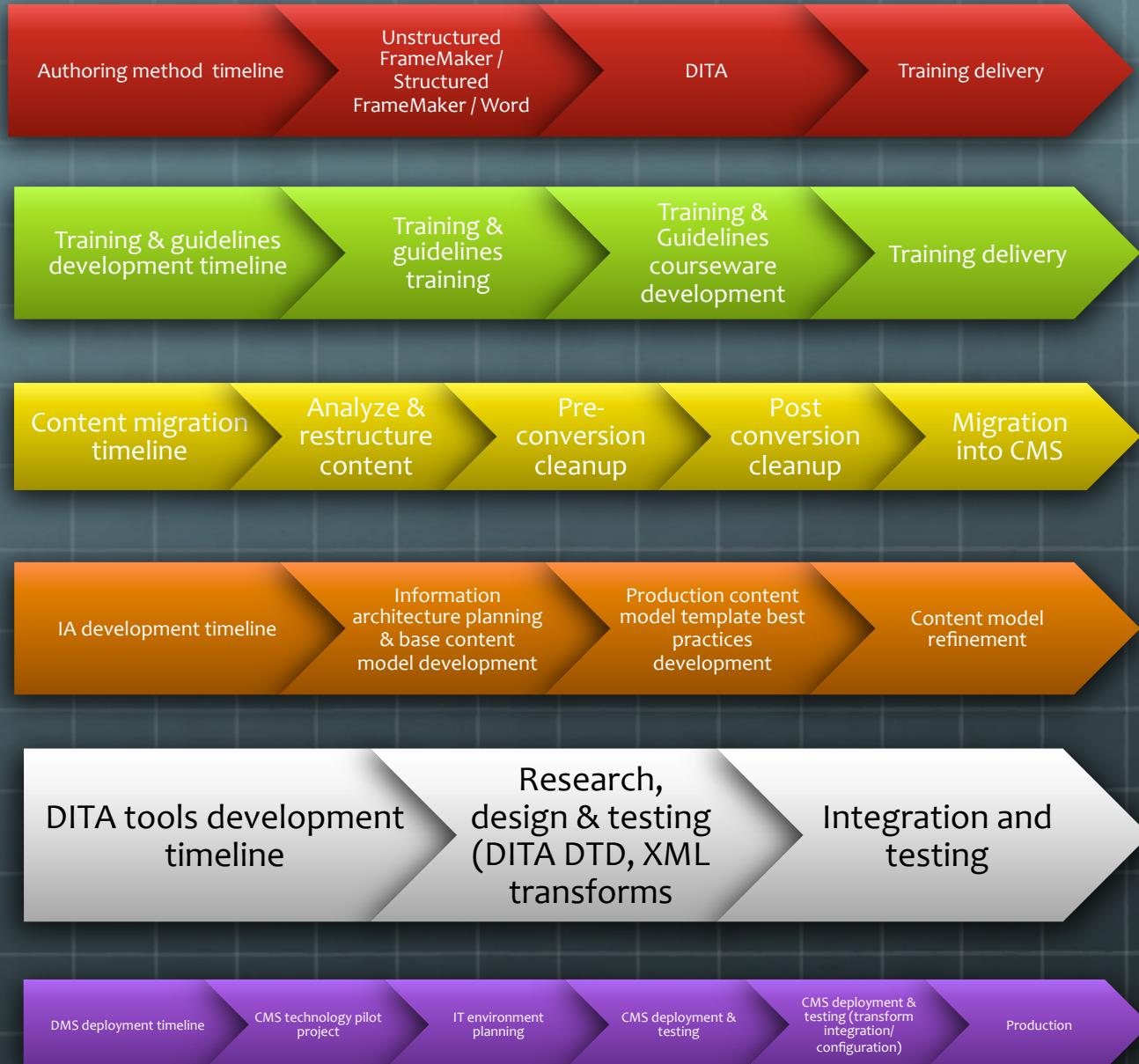
- First production POC for single sourcing contents without DITA
- Develop topic-based authoring guidelines for writers
- Define content transition strategy for legacy contents
- Establish requirement for tracking process infrastructure for tools
- Requirements gathering and initial planning
- Technology discovery and process pilot projects
- SSMS tools evaluations
- Define information architecture
- Develop business case
- Select CCM and authoring tool
- Submit business proposal for funding

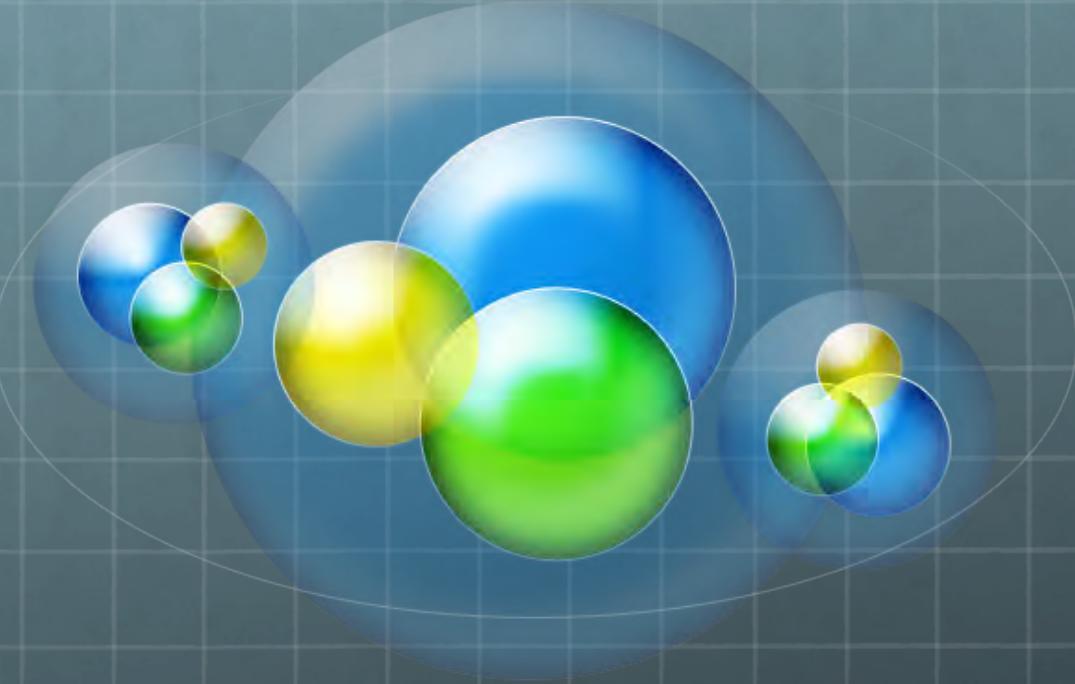
DITA/CCMS

Transition Requirements

- Develop global information architecture
- Design DITA CMS environment
- Evaluate and migrate first production contents
- Develop and deliver DITA training
- Implement DITA CMS environment
- DITA CMS production environment go-live
- DITA CMS production pilot content development and delivery

DITA/CMS Implementation Timeline





Best Practices and Success Factors

Best Practices

Planning

-  **Begin scoping resource requirement, effort and costs in advance**
-  **Complete planning deliverables in most cases on target dates**
-  **Early planning of content migration approach**

Communication

-  **Communicate expectation with all stakeholders as early as possible in the project timeline**
-  **Communicated appropriate progress reports to the non-management and management stakeholders**

Team collaboration

-  **Ensure positive team dynamics**
-  **Share expertise and leverage complementary skills sets**
-  **Acknowledge need for openness and transparency**

Key Success Factors

- Formation of global virtual teams
 - Leverage complementary skill sets
 - Flexible role-sharing model
- Understanding of DITA/CCMS implementation objectives
 - Common goals, methodology, terminology
 - Co-ownership of DITA implementation deliverables
- Collaboration
 - In-person participation in key stages of project
 - In-person on-site training and workshops
 - Extended off-site training
 - Ongoing corporate kickball tourneys
 - Regular remote collaboration

Key Success Factors

- Early engagement of key stakeholders
 - Ensure management team is aware of initiatives and progress
 - IT collaboration from early stages of project
- Vendor strategy
 - Engage specialist to guide implementation of DITA architecture and tools
 - Ensure implemented DITA framework is simple and easy to maintain in-house
 - Engage specialists who can mentor and transfer knowledge to in-house teams

Focus Area: People

- Dedicated team development
 - Labor intensive project
 - Support aggressive schedule and deliverables
 - Complete all planning phases thoroughly
 - Impacts implementation period and costs
- Resource transition
 - Define DITA CCMS roles
 - Consider transition of existing resources to new roles
 - Benefits of taking inventory of existing talent
- Customized transition planning and training
 - Planning for change in workflow
 - Role-based training
 - Timing of appropriate training
 - Identify training requirements and options
 - DITA skill improvement through expert mentoring

Focus Area: Processes

- Scalable processes
- Establish scalable change / requirements tracking process infrastructure
- Define content development and migration processes by conducting pilot projects.

Focus Area: Content

- **Information Architecture**

- Develop information architecture based on detailed analysis of existing contents and deliverables
 - Common information architecture development with co-ownership of DITA implementation deliverables

- **Content analysis and migration**

- Analysis and evaluation of all source content to separate legacy contents and identity reuse
 - Content restructuring and pre-conversion preparation
 - Accurate content mapping from source format to DITA

Focus Area: Technology

- Tools selection
 - Select tools set that meets current and future content development requirements
 - Perform use case based functional evaluation of tools instead of feature set evaluation

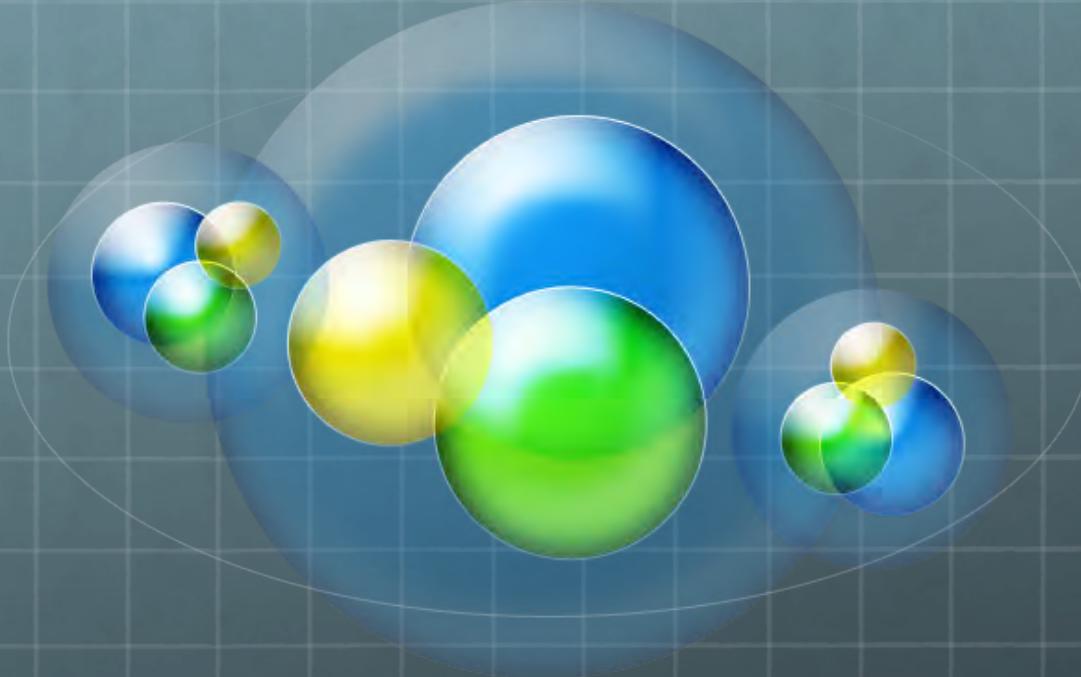
- Tools development approach
 - Iteratively develop content model, DTD, publishing transforms
 - Outsource / develop conversion and migration tools
 - Prototype DITA tools development to verify development methodology

Collaborative Solutions

- Frequent face-to-face status meetings
- Global teams with shared responsibilities for DIT CMS implementation and supporting initiatives
- Leverage complementary technical and non-technical skill sets across virtual teams
- Develop common terminology to discuss technical concepts; a common technical language
- Collaborative information architecture workshops to identify content requirements

Conclusion

- Learn from other corporate DITA/CMS implementations
- Creative resourcing models and role assignments can work for planning phase
- Dedicated resources needed for implementation phase
- Leverage in-house expertise for transform development and conversion migration tools development
- Automated conversion verification tools needed to avoid time-consuming baseline content verification



DITA & CCMS implementation is not a trivial undertaking.