



Chunking Content with Confidence

2008-06-23

Presented at X-Pubs 2008 in London

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Outline



Technical Documentation at Qimonda

Introduction to Chunking (aka Modularization)

Motivation for Chunking

Strategies

My Blend of Strategies

We are a Top 3 Global DRAM Manufacturer*



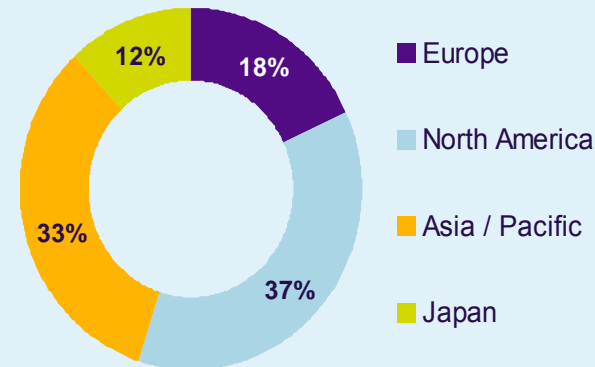
Our Company

- NYSE listed since August 9, 2006
- 13,500 employees globally
- Major R&D operations in 6 locations on three continents
- Manufacturing facilities in Europe, North America and Asia

Our Products

- Broad and growing range of DRAM products for infrastructure, graphics, mobile and consumer applications
- Standard DRAMs for use in PCs and workstations

Our Global Footprint: FY 07 Revenues EUR 3.6bn



Strong Customer Base



*Calendar year 2007, by revenues. Source: Gartner, February 2008

Qimonda TechDoc

Some Numbers



One central department with about ten people

- Information developers, authors, programmers, contractors, students

Tasks

- About 1000 documents as PDF to be administrated in DMS
- 150 releases of technical documents per month
- Up to 100 review and approval cycles per month

Deliverables are

- English only – for engineers to build systems and applications
- PDF only – for download, no hardcopies distributed



Structured FrameMaker 7.1 since 2004

New DITA-based Single-Sourcing CMS

- XMetaL Author and XMAX for editing linked to
- MS Sharepoint as repository
- DITA Open Toolkit for publication with
- Adobe FrameMaker Server as PDF rendering engine

Introduction to Chunking

Chunking with Uncertainty



Coming from a book oriented paradigm there are quite some reasons to get smaller pieces of content by chunking.

But how do you know the right methodology or strategy?

Introduction to Chunking

Chunking with Uncertainty



- Ask longtime colleagues perfectly acquainted with the book paradigm?

Long standing colleagues love the traditional way they are used to.

- Ask a vendor of an XML tool?

Vendors encourage to use the strategy their tool was built for.

- Ask experts from a different company how they do it?

How likely is it they create same documents with similar process?

- Follow your gut feeling?

Maybe you did study technical documentation recently?

Introduction to Chunking From Uncertainty to Confidence



Better choices

- Read lots of books, whitepapers, success stories yourself
- Pay a well-known consultant with good records of past projects
- Listen to sound advice like
 - ▶ **Process first, tools last**
 - ▶ **Consider bottom-up versus top-down approach**
 - ▶ **Be patient**
 - ▶ **Decide between V model (waterfall) and agile project management**
- Qimonda decided to sponsor a master thesis on modularization

Introduction to Chunking Literature Radar



1. Complete methods for Content-Engineering

- ▶ Ann Rockley: “A unified Content Strategy”
- ▶ Prof. Sissi Closs “Single Source Publishing”

2. Methods for building up modules

- ▶ Prof. Wolfgang Ziegler “Die Richtige Größe finden” (Finding the right size)
- ▶ Kurt Ament “Single Sourcing – Building Modular Documentation”

3. Concepts for inner module structure

- ▶ Robert E. Horn “Information Mapping”
- ▶ Prof. Jürgen Muthig “Functional Design”



4. Theory and structure of standardized XML schemas

- ▶ DITA
- ▶ DocBook
- ▶ S1000D
- ▶ Mummasy

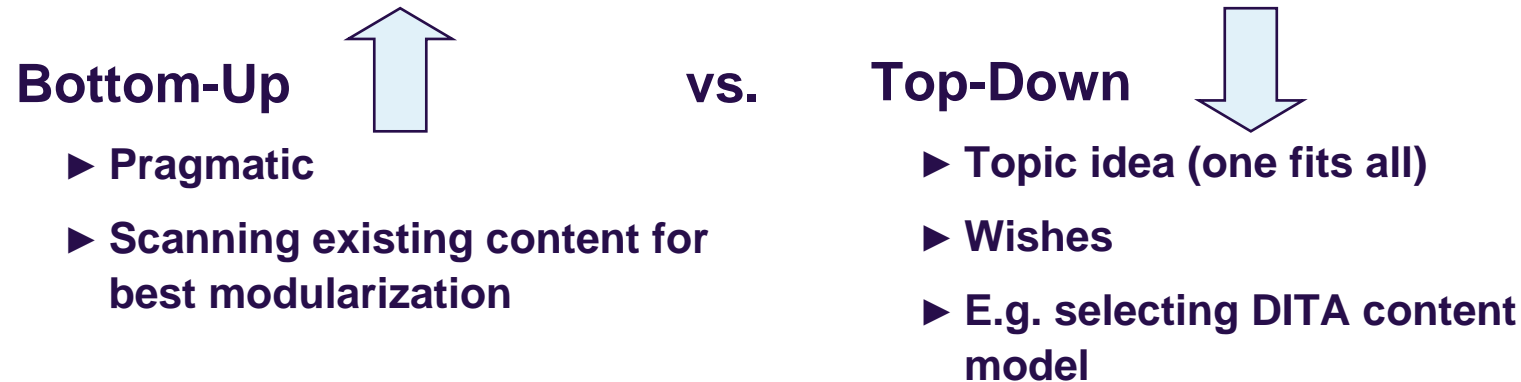
5. Miscellaneous

- ▶ Project management
- ▶ Migration
- ▶ Metadata
- ▶ Minimalism

Introduction to Chunking Basic Methodology



Methods proposed in literature disagree



Engineering knows synthesis: Meet-In-The-Middle !!

- ▶ Go up from existing experience and
- ▶ Come down with strategic decisions

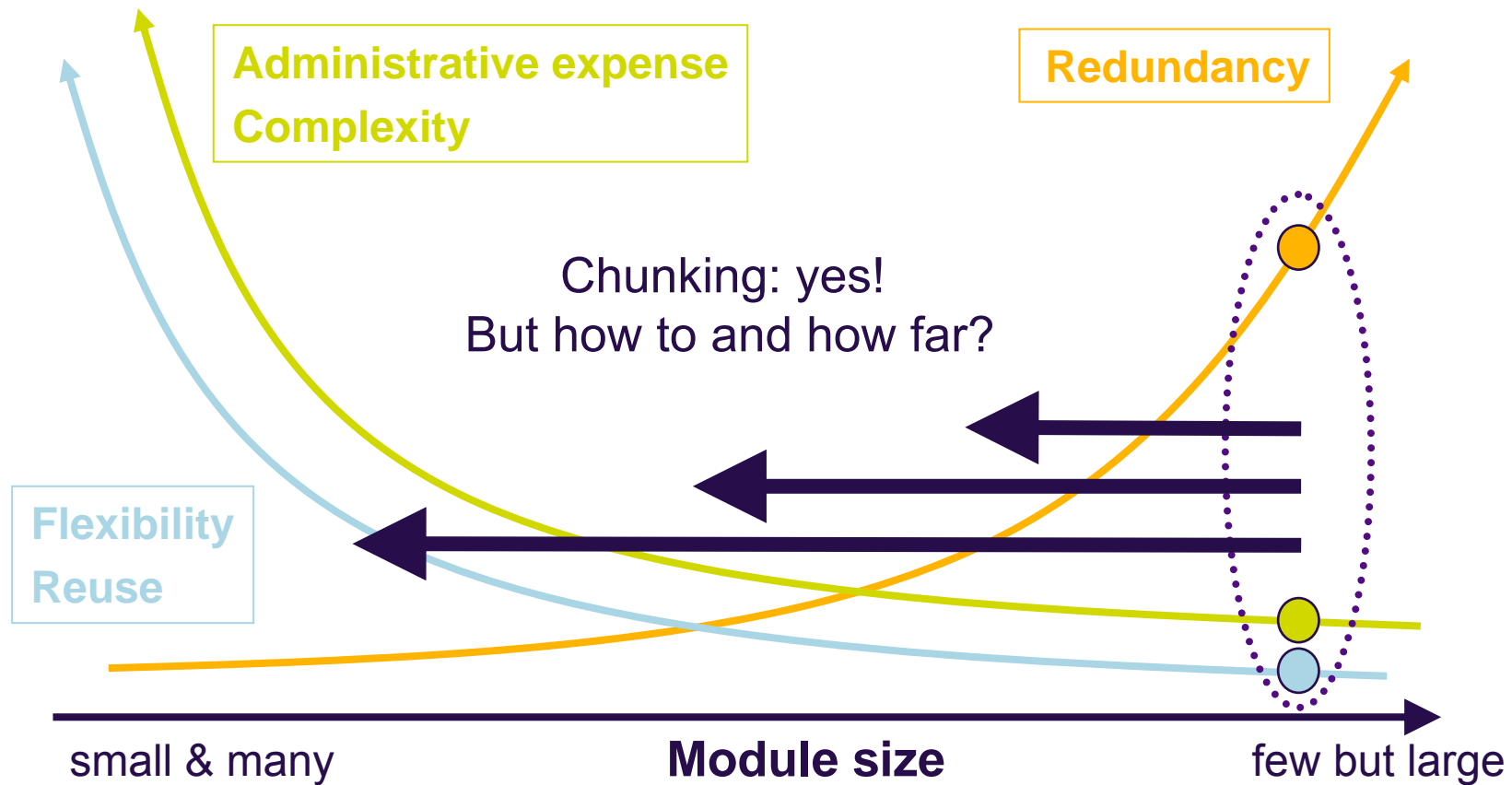


Motivation for Chunking

Why do most of us start with large content blocks?



- Even though this looks straight forward
→ it may not apply to your situation



Motivation for Chunking

Well known cost saver: Reuse



Reuse is a buzz word in engineering to lower cost!

More than one presentation can be filled with reuse concepts ...

- Reuse pool
- Living copy
- Nested
- ... and more

Reuse must be put in context with workflow.

Motivation for Chunking Workflow



Famous starting points

- Workflow: Creation
- Workflow: Review
- Workflow: Translation

Workflow depends on

- Number of documents, their size and update interval
- Creation from scratch or derived from existing documents
- Written by subject matter expert or information developer or yourself
- Degree of division of labour in your company and team size

Motivation for Chunking Workflow



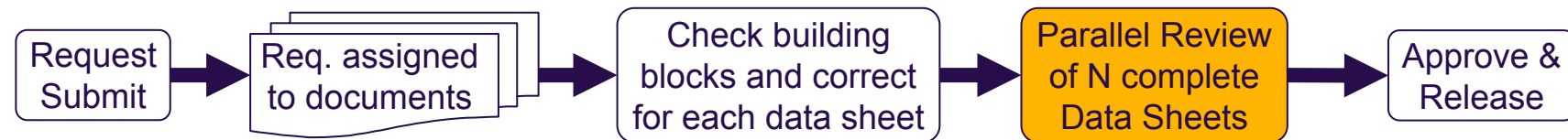
Smaller chunks allow

- Work in parallel instead of sequentially in a team setup
- Avoid duplication of work when
 - ▶ **Authoring (reuse),**
 - ▶ **Review (less redundancy),**
 - ▶ **Translation (more 100% matches), and**
 - ▶ **Rendering personalized deliverables (repurpose)**
- Semantic topics (DITA, Information Mapping)

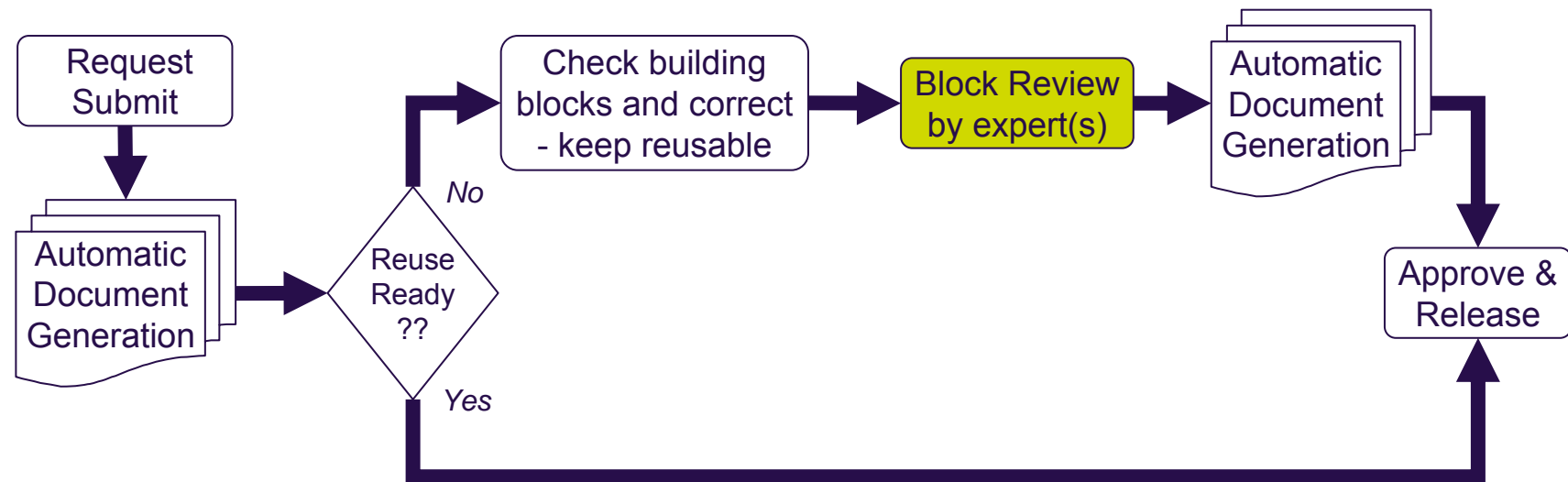
Motivation for Chunking Workflow at Qimonda



Old Workflow



CMS based Workflow



Motivation for Chunking Workflow



But

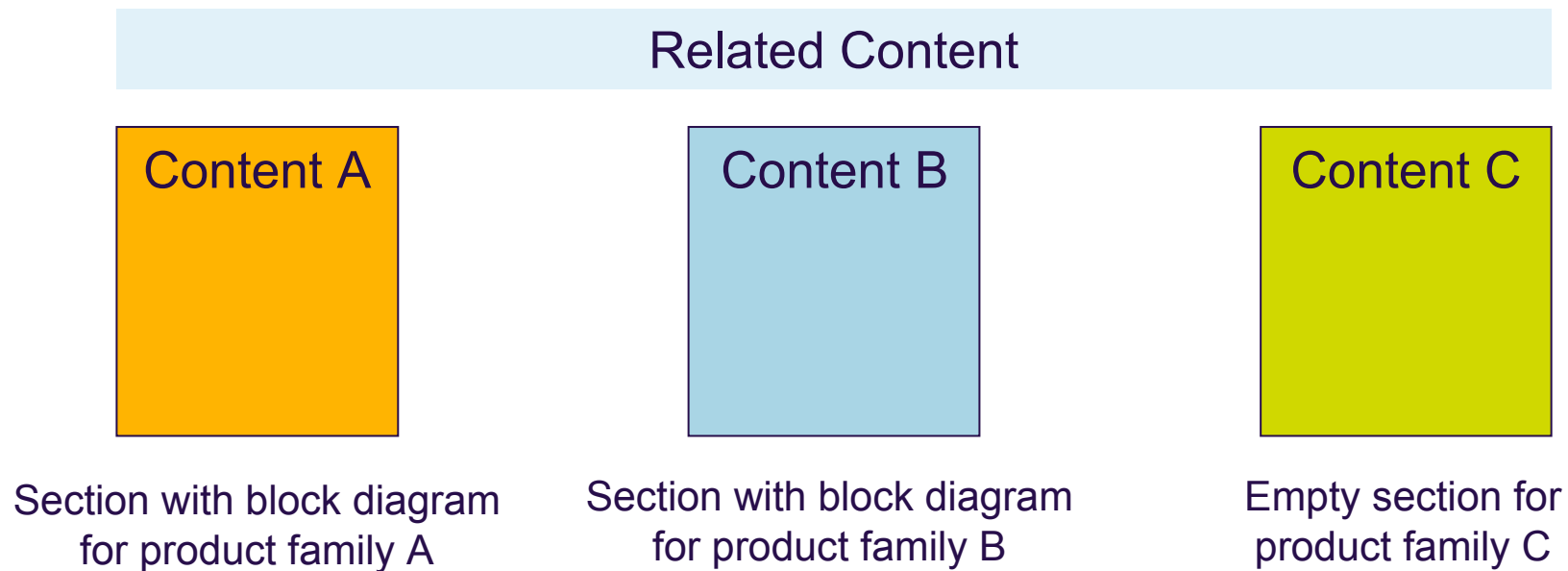
- You may need to use chunks that others created and maintain
 - ▶ **Loss of control for authors**
- Authoring, review and translation might be more difficult
 - ▶ **Loss of context for readers**
- More chunks mean more workflows to run
 - ▶ **Increase of work for administration**
- More metadata values or parameter needed to identify chunks
 - ▶ **Increase risk of errors**
- Require standardization of terminology, grammar, style
 - ▶ **Readers stumble over inconsistencies**

Strategies: Variation Management

Simple Module Variations



- Distinct variations of a module coexist as independent chunks
- Chunks share most metadata but differ in few to be identified correctly
- Higher redundancy – Administration easy because of module relations



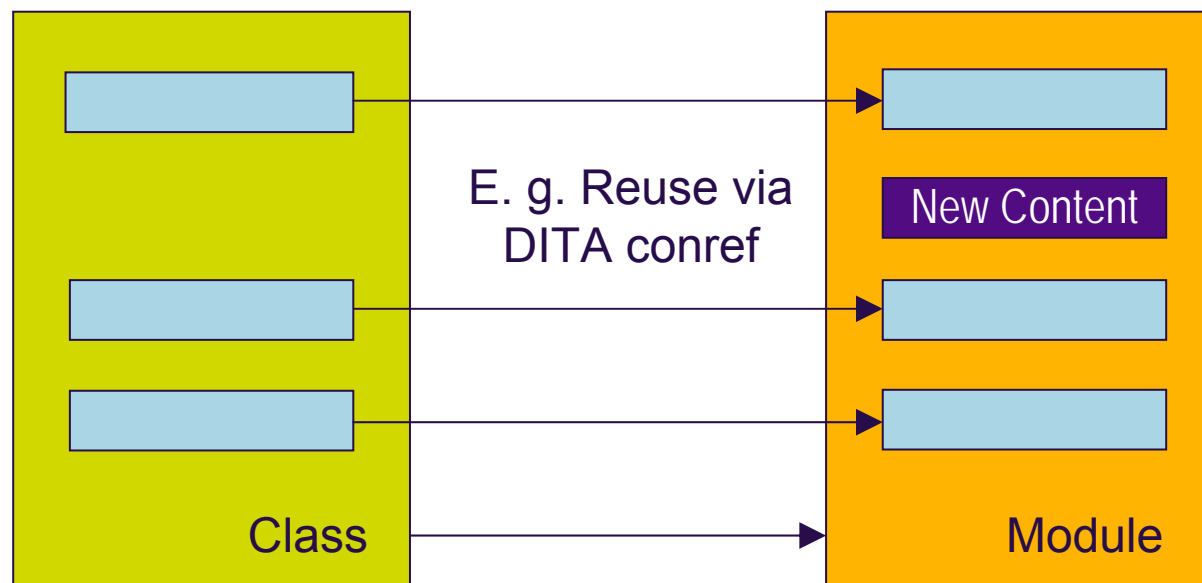
Strategies: Variation Management Inheritance



First use case: Inheritance of structure (DITA specialization)

Second use case: Inheritance of content (variation management)

- Largest commonness



Strategies: Variation Management

Reuse Pool



Collection of chunks of same kind

- Same DITA topic type
- Same XML tag like <fn>

Most widespread

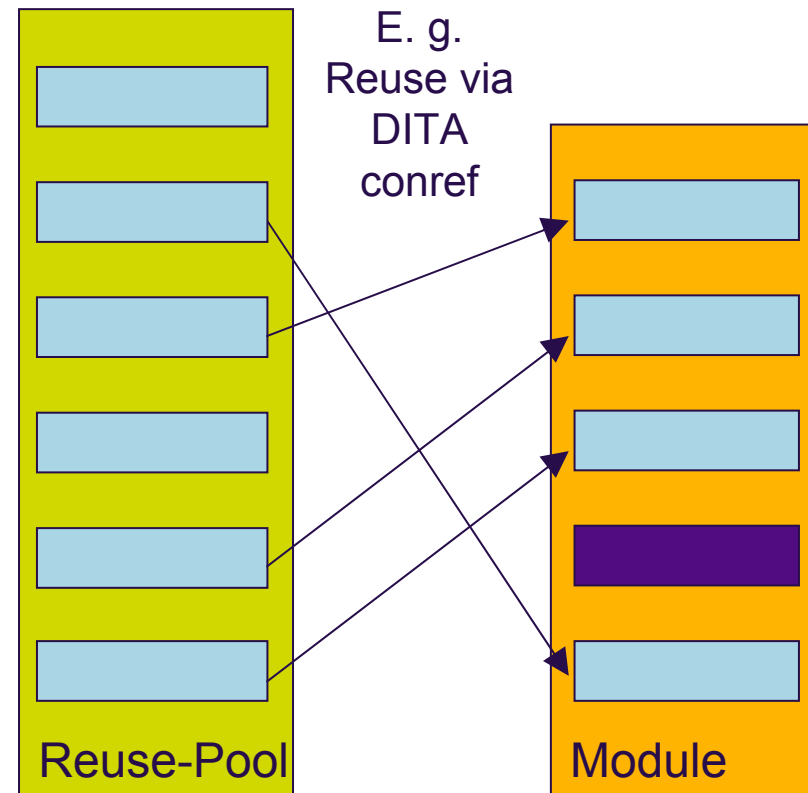
- Media pool with images
- Inserted via manual link or via metadata match

First use case

- Reuse

Second use case

- Variation management

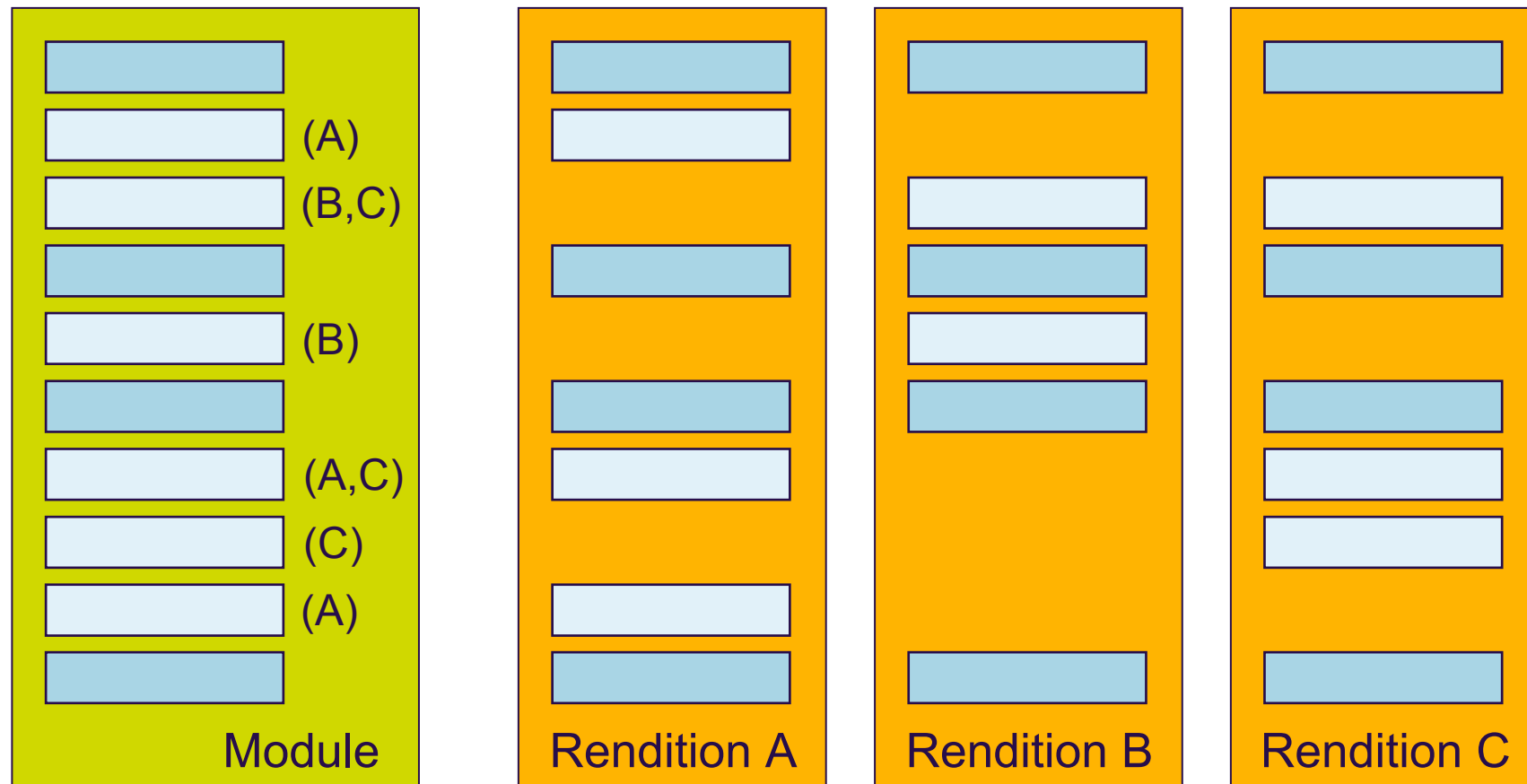


Strategies: Variation Management

Nested Reuse



Collection of Variations: “Nested Reuse” = Conditional Text



Strategies: Variation Management

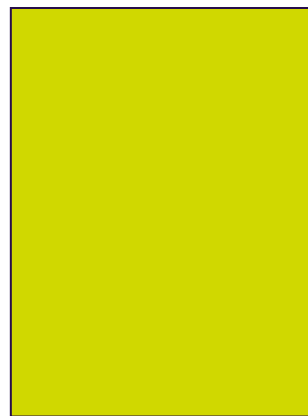
Living Copy



Also known as Copy-and-Paste.

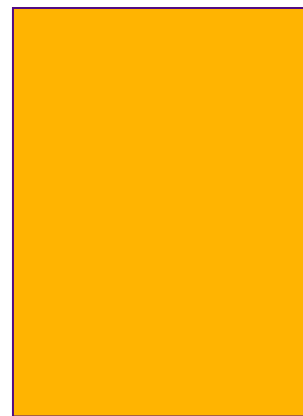
Typically not executed as strategy.

No link from source to copy → No update mechanism.



Source A

No Link

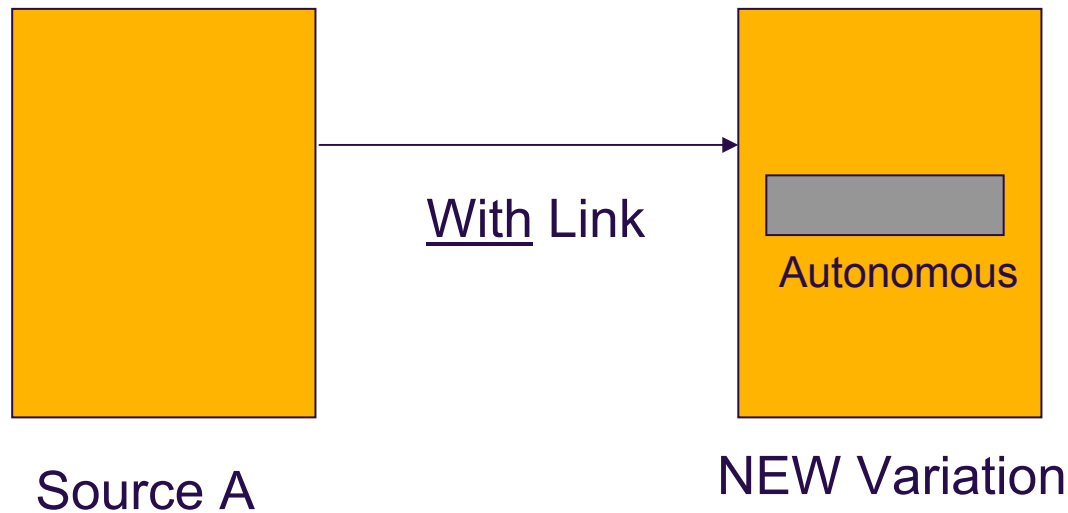


Autonomous Variation

Strategies: Variation Management Fragmented Reuse



Enhanced Living Copy but requires support by system.
Allows update notification of source to linked variations.



Strategies Semantic Topic Classes



Building of classes or typing of topics is common place

- Information Mapping by Horn suggests 7 information types.
- DITA by IBM/OASIS suggests 3 topic types.
- Functional Design by Muthig suggests dedicated semantic instruction topics.
- Class Concept by Closs suggests building of topic classes.

Semantic topic classes

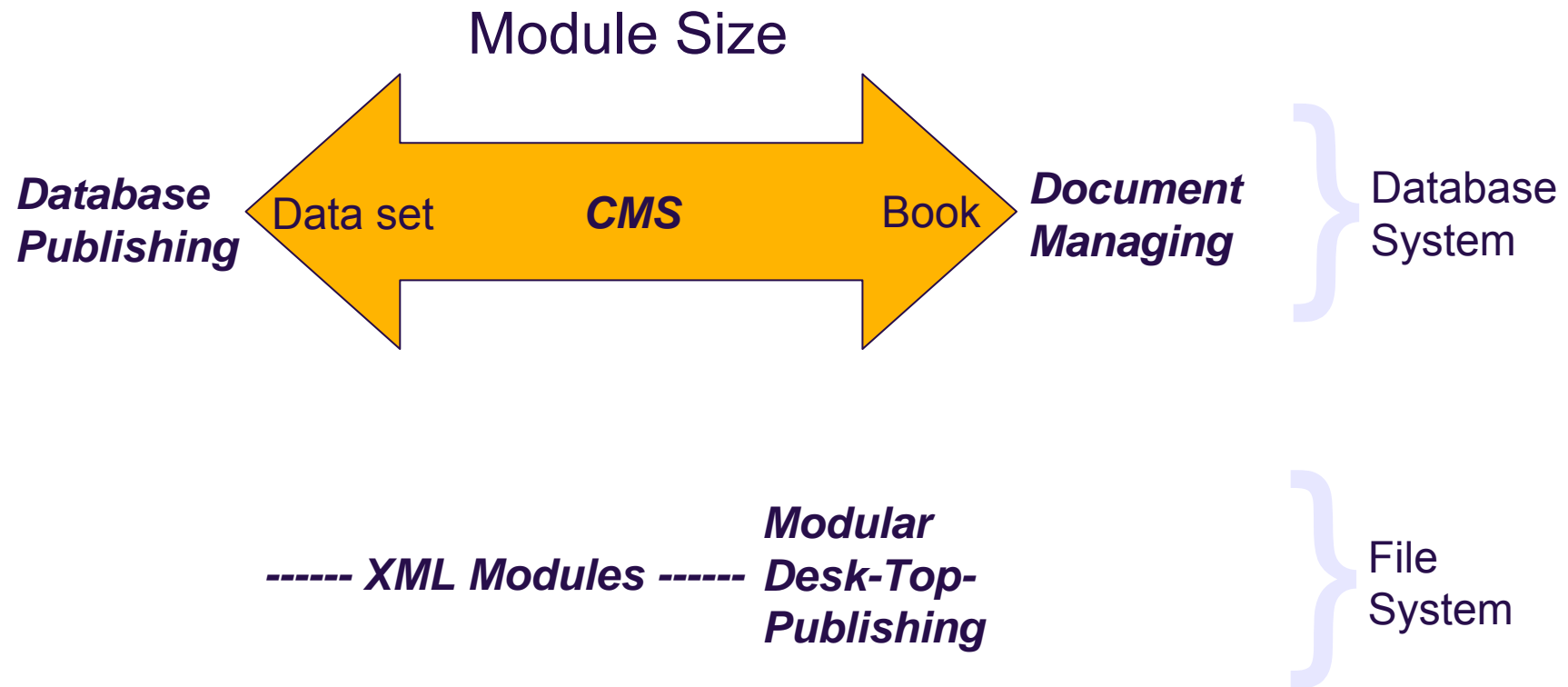
- Define a generic purpose of a topic class
- Provide tailored and adopted set of tags (less and more specific)
- Increase reuse opportunities due to semantic separation

Strategies: Single Source & Cross Media Publishing

Range of Module Size in CMS



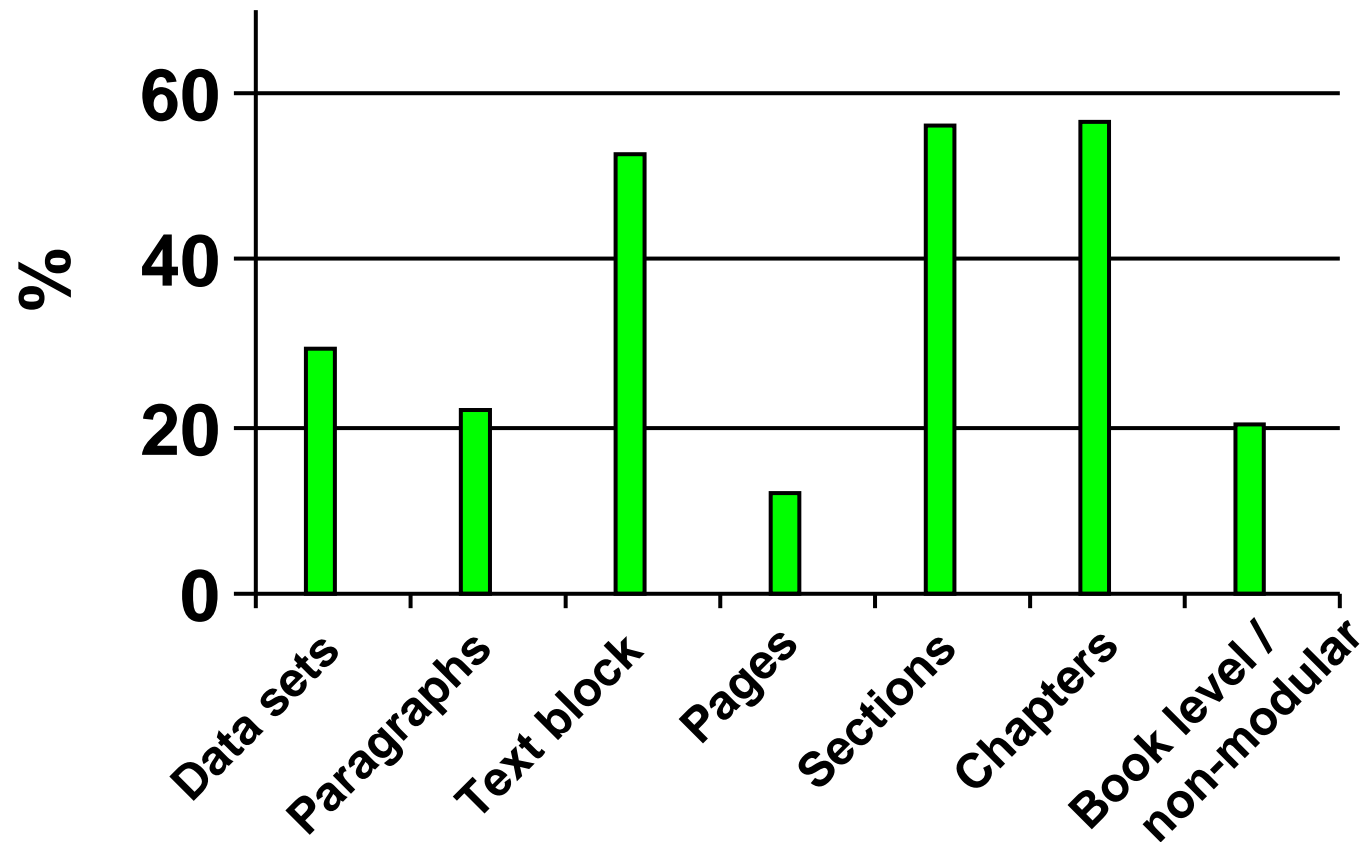
Module size depends on software used and authoring strategy.



Strategies Possible Chunking Level



■ tekcom CMS Survey 2005 (612 Responses)

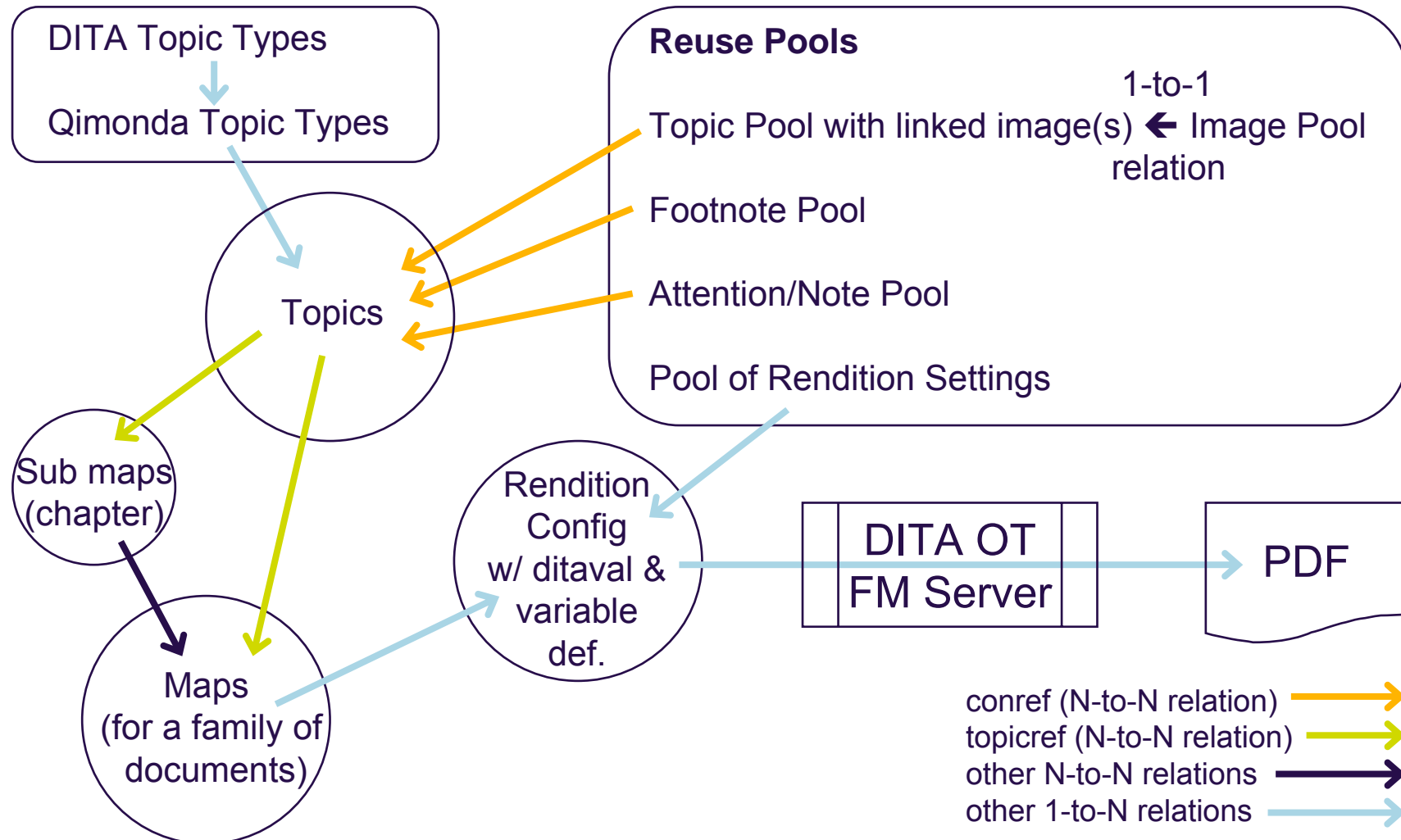


My Blend of Strategies Guideline for Chunking



- Comply with DITA's topic definition for task, concept, reference.
 - ▶ **Semantically correct topics.**
- Restrict each topic to answer one question only.
 - ▶ **Increase reuse opportunities.**
- One topic is to be reviewed by a single group of subject matter experts.
 - ▶ **Speed up review and approval cycle**
- A topic belongs to a single product family or is of kind generic.
 - ▶ **Use inheritance of generic topics for cross-family reuse**

My Blend of Strategies Map of Chunks



My Blend of Strategies

The New Qimonda TechDoc Approach



Old style

cover.fm

chapter_01.fm

chapter_02.fm

chapter_03.fm

...
chapter_08.fm
TOC.fm
imprint.fm

Qimonda Document

Cover page
Revision History
1 Chapter
1.1 Section
1.2 Section
2 Chapter

3 Chapter
3.1 Section
3.2 Section

...
8 Chapter
Table of Contents
Imprint

New style

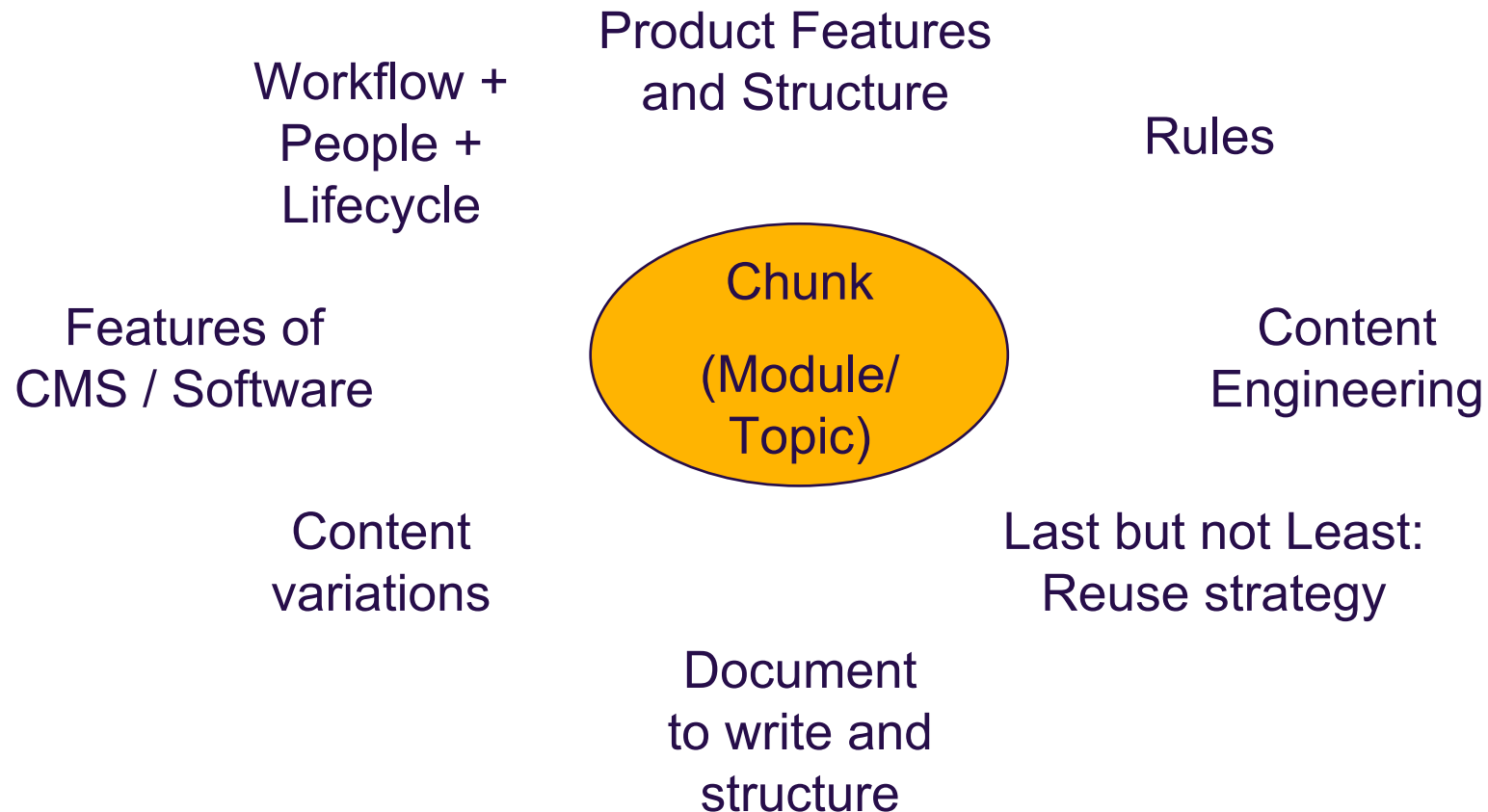
(Template)
(On the fly)
concept_01.xml
concept_01a.xml
reference_01b.xml
concept_02.xml
reference_02a.xml
reference_02b.xml
concept_03.xml
reference_03a.xml
task_03b.xml

...
reference_08.xml
(On the fly)
(Template)

Summary Conclusion for Chunking Information



What affects the shape, characteristics and size of chunks ??



Time for Questions & Comments



Ready for chunking ???



Increased confidence ???

Thank you

**The World's Leading
Creative Memory Company**

