



# Navigating Modular Content in Life Sciences: 6 Key Challenges and Solutions

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The life sciences industry is undergoing a profound transformation in content creation and delivery, with modular content taking centre stage. This innovative approach allows companies to break down content into reusable, pre-approved components, enabling faster workflows, improved compliance, and greater personalization. By optimizing content production, modular content offers substantial value, such as reduced costs, enhanced efficiency, and the ability to deliver consistent messaging across diverse markets and channels.

However, the path to [modular content adoption](#) is not without its complexities. Life sciences companies face numerous challenges, including building scalable taxonomy frameworks, optimizing workflows, aligning global and local teams, and driving cultural change within their organizations. These hurdles can slow down adoption, create inefficiencies, and limit the potential benefits of modular content.

This report explores six critical challenges companies encounter when adopting modular content, offering a blend of actionable, holistic solutions to address them effectively. By leveraging advanced technologies, such as Generative AI, alongside a holistic digital content strategy, organizations can overcome these obstacles, enabling smoother transitions and making use of the full potential of modular content in optimizing their infrastructure.

# 1. Challenge:

## Building a Scalable Tagging and Taxonomy Framework

### The Problem

Modular content relies on a robust [tagging and taxonomy framework](#) to enable the efficient categorization, retrieval, and reuse of content modules. However, achieving scalability across multiple regions, languages, and brands can be daunting. Issues such as inconsistent tagging practices, overly complex metadata, and platform misalignment exacerbate the problem.

### The Solution

To address the complexities of creating a scalable tagging and taxonomy framework, adopting a structured and strategic approach is essential. Here's how organizations can overcome the challenges associated with taxonomy design:



#### Adopt a two-layered taxonomy approach

Start with a global core taxonomy to maintain consistency across markets. This core taxonomy should include universal categories such as product names, therapeutic areas, indications, and compliance requirements that are relevant globally. Complement this with a regional taxonomy that allows local markets the flexibility to incorporate market-specific tags. These tags should address language differences, local regulatory guidelines, and cultural nuances, ensuring the taxonomy is adaptable to diverse regional needs without losing global alignment.



#### Simplify metadata categories

Overly complex metadata structures can overwhelm users and lead to inefficiencies. Simplify metadata categories by focusing on the most relevant and frequently used fields. Conduct regular audits of the taxonomy to identify and remove redundant or outdated tags, ensuring that the framework remains streamlined and effective.



#### Align taxonomies across platforms

Ensure that the taxonomy framework is aligned across all platforms. This includes content management systems (CMS), digital asset management (DAM) systems, and MarTech platforms. Seamless integration enables consistent tagging, quick retrieval, and smoother reuse of assets, ultimately driving operational efficiency.



### AI-driven semantic tagging

GenAI uses advanced natural language processing to analyze the context of content and automatically generate precise, relevant tags. This reduces reliance on manual tagging, enhances accuracy, and ensures consistent metadata. It improves workflows, improves content discoverability, and increases the efficiency of modular content management systems.



### Predictive metadata solutions

By analyzing historical data and usage trends, GenAI suggests metadata tags likely to enhance content reuse and discoverability. These predictions are tailored to user behavior, search patterns, and organizational needs. This reduces redundant effort, ensures metadata relevance, and fosters a more efficient modular content ecosystem.



### Key insight

A well-structured, scalable taxonomy framework enhances collaboration between global and local teams, ensures compliance, and significantly reduces content development costs.

## 2. Challenge: Assessing Organizational Readiness for Modular Content

### The Problem

Transitioning to modular content requires more than tools; it demands cultural, operational, and strategic alignment. Many organizations dive into modular content without fully assessing their readiness, leading to poor adoption and inefficiencies.

### The Solution

To ensure a successful transition to modular content, organizations must prepare comprehensively. Here are the key strategies to ensure smooth adoption and maximizing impact:



## Conduct a comprehensive readiness audit

Evaluate team skills, existing workflows, and technological infrastructure to identify gaps.

### Key Checks in a Modular Content Readiness Audit

<b>1</b>	<b>Assess</b> content creators' familiarity with modular workflows	<b>2</b>	<b>Gauge</b> stakeholder understanding of modular content benefits	<b>3</b>	<b>Review</b> how well existing tools support modular content needs
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### Define clear objectives for modular content

Establish measurable and achievable goals to guide the adoption process. Examples include reducing content production time by 30% or increasing asset reuse by 50%. Clear objectives help ensure alignment across teams and provide benchmarks for success.



### Secure stakeholders buy-in

Gain support from brand teams, local markets, and regulatory leaders early in the process. Build awareness of the benefits of modular content and use pilot projects to showcase success, fostering confidence and commitment among stakeholders.



### Invest in training programs

Upskill teams through targeted initiatives such as hands-on workshops, case studies, and simulations tailored to modular workflows. These programs should focus on equipping teams with the knowledge and tools required to adapt to new processes effectively.



### AI-powered workflow mapping

GenAI analyzes existing workflows to pinpoint inefficiencies, bottlenecks, and redundancies. By leveraging data insights, it recommends optimized processes tailored to organizational needs. This approach enhances efficiency, reduces delays, and ensures smoother transitions, enabling teams to focus on higher-value tasks while maintaining seamless modular content operations.



## Key insight

Organizational readiness goes beyond tools—it's about aligning people, processes, and purpose to ensure a smooth adoption journey.

### 3. Challenge:

## Integrating Automated Tools

### The Problem

Content automation is essential for scalable modular content workflows. However, fragmented systems and poorly integrated tools hinder the seamless flow of content between creation, approval, and distribution stages.

### The Solution

To address the inefficiencies caused by fragmented systems, a unified approach to content automation and tool integration is critical for creating scalable and [seamless modular content workflows](#). Organizations should focus on the following strategies:



#### Centralize content storage with a robust DAM

A centralized DAM system serves as the single source of truth for all modular assets. Ensure DAM adoption across all teams to eliminate silos, improve content accessibility, and enable seamless reuse of assets.



#### Invest in middleware for tool integration

Middleware platforms act as connectors between various systems, ensuring smooth data exchange and reducing the need for manual interventions. This integration fosters efficiency and ensures that all tools work cohesively within the modular content ecosystem.



#### Enable end-to-end automation

Implement tools such as workflow automation platforms, AI-powered content tagging systems, and auto-translation engines to reduce bottlenecks in content creation, review, and approval processes. Automation not only accelerates workflows but also minimizes errors and improves consistency.



#### Leverage analytics tools

Integrate analytics tools to monitor content usage, measure the performance of individual modules, and derive insights to inform future content strategies. These insights help optimize workflows and ensure that content meets business objectives effectively.



### Key insight

Seamless integration between tools creates a unified system that enhances workflow efficiency, reduces errors, and drives cost savings.

## 4. Challenge:

# Optimizing MLR Processes

### The Problem

MLR approval process remains one of the most significant bottlenecks in pharmaceutical content workflows. Modular content can expedite MLR reviews, but only if global and local teams are aligned and workflows are optimized.

### The Solution

To [streamline the MLR approval process](#) and reduce delays, organizations must adopt a combination of automation, pre-approved content workflows, and collaborative strategies:



#### Establish pre-approved modules

Develop modular assets with pre-approved elements such as key messages, visuals, and templates. These pre-approved components significantly reduce the need for repetitive reviews, enabling faster content approvals and ensuring compliance from the outset.



#### Automate compliance checks

Leverage AI-powered compliance tools to identify regulatory risks and flag potential issues during content creation. Early detection minimizes rework, enhances accuracy, and ensures that content aligns with both global and local regulatory requirements.



#### AI-driven optimization

GenAI can analyze pre-approved modules to ensure compliance by cross-referencing against regulatory guidelines and historical approval data. It identifies potential red flags, such as inconsistent claims or unapproved terms, during content creation. Integrated into shared review platforms, it facilitates collaborative, real-time suggestions, significantly reducing review cycles and approval timelines.



#### Promote collaboration between global and local MLR teams

Implement shared review platforms that allow global and local teams to collaboratively evaluate content in real time. These platforms facilitate transparency, reduce duplication of efforts, and ensure alignment across regions.



#### Streamline processes with risk-based review

Adopt a risk-based review approach by focusing detailed scrutiny on high-risk content while applying light-touch reviews for low-risk, pre-approved modules. This method optimizes review cycles, reducing bottlenecks without compromising compliance.



## Key insight

Optimizing MLR processes through automation and collaboration can significantly reduce approval timelines, ensuring faster time-to-market while maintaining compliance.

## 5. Challenge: Measuring Success with Modular Content

### The Problem

Without measurable outcomes, modular content initiatives risk losing momentum and organizational support. Identifying relevant KPIs and tracking progress are essential for demonstrating ROI and driving continuous improvement.

### The Solution

To measure the success of modular content adoption and drive continuous improvement, organizations must establish robust benchmarking and tracking mechanisms:



#### Benchmark current performance

Start by establishing baseline metrics for critical areas such as content production time, localization efficiency, and approval timelines. These benchmarks provide a reference point for evaluating improvements as modular content workflows are implemented.



#### Define advanced KPIs

Identify and track key performance indicators (KPIs) to measure the effectiveness of modular content.

##### Essential KPIs for Content Efficiency

###### Reuse Rates

Tracks how often assets are reused across campaigns and markets

###### Localization Speed

Measures how quickly content is adapted for local use

###### Compliance Time

Monitors approval turnaround and highlights process efficiency

###### Engagement Metrics

Analyze content performance in delivering personalized experiences





### AI-powered dashboards

Deploy analytics dashboards to provide real-time visibility into modular content performance across geographies, teams, and campaigns. Take advantage of GenAI to automate data analysis by processing performance metrics and identifying trends in real time. It generates actionable insights, such as underperforming modules or untapped reuse opportunities, and presents them through intuitive dashboards. This helps teams to make data-driven decisions, improve modular content strategies, and enhance overall efficiency.



### Key insight

Measuring modular content success requires comprehensive KPIs that align with business objectives, enabling data-driven decisions and continuous optimization.

## 6. Challenge: Managing Organizational Change

### The Problem

Shifting to modular content is not just a technological transformation—it's a cultural one. Without proper change management, resistance from teams can slow adoption, negating the benefits of modular workflows.

### The Solution

To ensure a successful transition to modular content, organizations must focus on comprehensive change management strategies that prioritize stakeholder engagement and clear communication:



### Conduct stakeholder impact analysis

Conduct an analysis to understand how different teams—marketing, regulatory, creative—will be impacted by the transition to modular content. Tailor communication and training efforts based on the unique needs and challenges faced by each group, ensuring they are fully prepared for the changes ahead.



## Behavioral insights for adoption

Leverage GenAI to analyze user behavior across teams to detect resistance patterns, such as low tool usage or incomplete training. By identifying barriers, it recommends tailored strategies like personalized training modules, targeted communication, or gamified engagement. These insights drive higher adoption rates, ensuring smoother transitions to modular content workflows.



### Establish clear roles and responsibilities

Assign modular content champions within each department. These advocates can act as mentors, provide feedback, and help guide their teams through the adoption process. Having dedicated champions ensures that the transition is managed effectively at every level.



### Adopt a phased implementation approach

Start with small-scale pilots to test the waters. These pilots help identify potential challenges early in the process and provide valuable insights to refine workflows before rolling out modular content at scale.



### Develop a strong communication strategy

Communication is key in overcoming resistance to change. Regularly share the benefits of modular content with stakeholders through case studies, success stories, and relevant metrics that demonstrate value. This builds trust, boosts morale, and garners enthusiasm for the change.



### Monitor adoption KPIs

Track metrics such as training completion rates, tool adoption, and stakeholder satisfaction to assess the success of the change management process. These KPIs will help ensure that the transition remains on track and that any obstacles are promptly addressed.



## Key insight

Effective change management is about addressing the human side of transformation, ensuring teams are engaged, trained, and aligned with the organization's modular content vision.

# A Strategic Path to Modular Content Success with Indegene's Expertise

Transitioning to modular content is no small feat. It requires overcoming challenges related to taxonomy, readiness, automation, regulatory reviews, measurement, and change management. However, each challenge also represents an opportunity for growth, innovation, and efficiency.

By adopting scalable taxonomies, aligning teams, integrating automated tools, streamlining MLR processes, and measuring success with relevant KPIs, life sciences companies can unlock the full potential of modular content. Change management acts as the critical enabler, ensuring that the transformation is embraced across the organization.

At Indegene, we specialize in enabling life sciences organizations to overcome these challenges with tailored strategies and cutting-edge solutions. From designing scalable taxonomy frameworks to integrating automation and optimizing regulatory processes, our expertise ensures a smooth modular content journey.

**Let's partner to accelerate your transformation and build a future-ready content ecosystem. [Connect with us today!](#)**

## Authors



**Sharanjit Singh**

VP, Strategic Solutions,  
Indegene



**Jhanvi Dhawan**

Director, Digital Transformation,  
Indegene



## About Indegene

We are a digital-first, life sciences commercialization company. We help biopharmaceutical, emerging biotech and medical device companies develop products, get them to the market, and grow their impact through the life cycle in a more effective, efficient, and modern way. We bring together healthcare domain expertise, fit-for-purpose technology, and an agile operating model to provide a diverse range of solutions. These aim to deliver, amongst other outcomes, a personalized, scalable and omnichannel experience for patients and physicians. It's what drives our team and our purpose to enable healthcare organizations to be future ready.



Indegene, Inc. 150 College Rd W, Suite 104, Princeton, NJ 08540



+1 732 750 2901, +1 732 750 7990



[www.linkedin.com/company/indegene](https://www.linkedin.com/company/indegene)



[connect@indegene.com](mailto:connect@indegene.com)



[www.indegene.com](https://www.indegene.com)

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