

IBM Consulting

Content Services Agents

Agentic AI for Content

Authoring

Editing

Review

Translation

Publishing

IBM Point of View, Client Success Stories and Industry Solution for Life Sciences and Healthcare

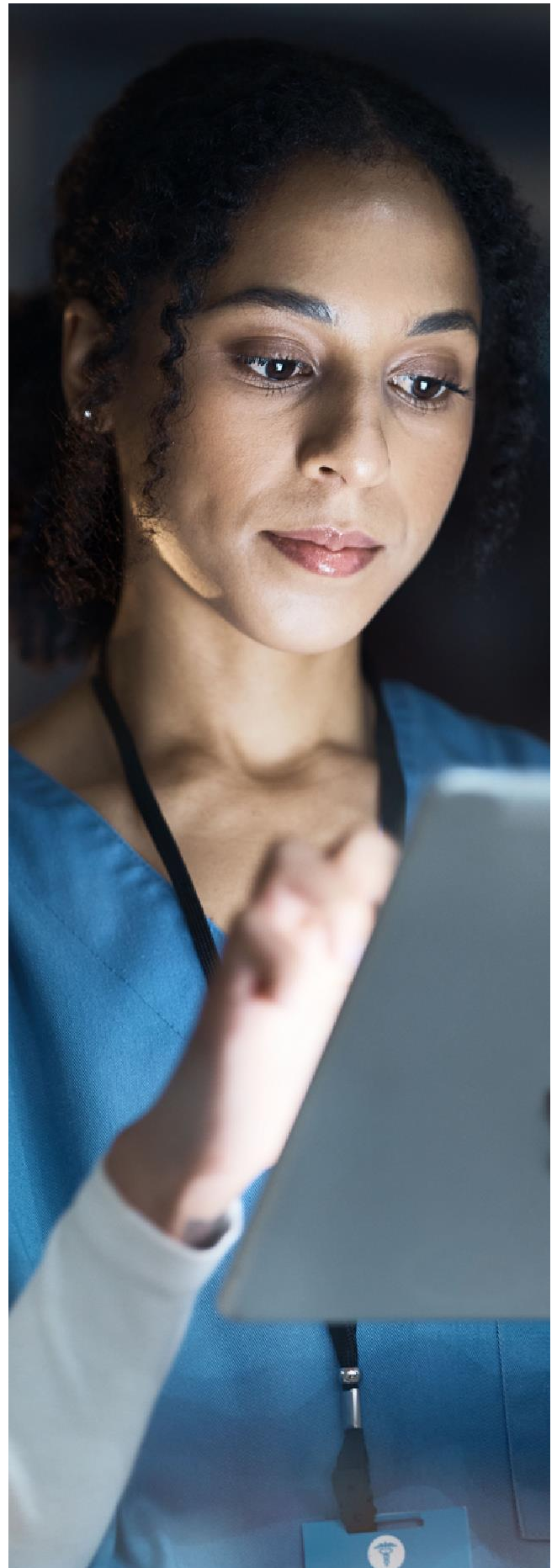


Content creation and review in Life Sciences and Healthcare

The Life Sciences and Healthcare industries are poised for significant transformation with many organizations having spent the last 2+ years experimenting and piloting with Generative AI. Some of these organizations have operationalized Generative AI solutions and realized business value including areas such as Customer Service, HR, Procurement and Prior Authorization. Some of these capabilities have realized business benefits including improved Customer and Employee experiences, productivity gains and operational cost savings. Operationalizing Generative AI and especially Agentic AI has required the use of guardrails for responsible use of AI to ensure security, privacy, safety, quality, trustworthiness and ethical use of such technologies, especially in regulated areas of healthcare and life sciences.

While some of the above Generative AI use cases may involve a certain level of content and/or data generation (ex: email generation, image generation, text summarization, language translation), a key capability of Large Language Models (LLMs), the scope and complexity of generation of new data or content has been limited with prompt engineering methods.

The scope of this paper with our industry point of view, our successful, industry-first, Production implementation at Enterprise scale of document generation and our Agentic AI Asset called IBM Consulting **Content Services Agents** that accelerates time to value, is broad and of higher value. This enterprise-wide capability with multi-modal content generation at scale based on enterprise and other relevant real-world datasets can generate multiple content types such as documents with text, tables, images, analytics but also audio, video, medical images, time-series data and AR and VR content.



What is IBM Consulting Content Services Agents ?

An IBM Consulting asset that can generate any type of content or document whether it is a Report, a Summary document, a Standard Operating Procedure, Protocol, RFP Response, Grant Proposal, industry or domain-specific documents such as Regulatory Submission documents, Scientific articles, Annual Reports, Marketing Promotional materials, Payer-Provider Contracts, Job Postings etc.

This multi-modal content generation capability using Agentic AI with multi-GenAI Autonomous Agents powered by Foundation Models / Large Language Models (LLMs) and Advanced Content Creation services can generate documents at scale with multiple modalities including text, tables, figures, charts, images.

AI Governance is an integrated and real-time capability of this Agentic AI asset. Business, Quality, Security, Privacy and Regulatory reviews of the generated documents are integrated with the Agentic AI Authoring workflow infusing regulatory intelligence.

IBM Consulting **Content Services Agents** (CSA) can be enabled on any Organization's preferred Cloud environment (Microsoft Azure, AWS, Google Cloud Platform, Oracle AI Cloud, Databricks, Dataiku, IBM Cloud etc.) along with IBM Consulting services.

Example Use Cases supported

Content Services Agents will be able to support but not limited to the following:

Life Sciences Industry:

- **R&D:** Regulatory Submissions document types across Modules 1 through 5 of the eCTD submission. Examples are New Drug Applications (NDA), Biologics License Application (BLA), Investigational New Drugs (IND), Toxicology Reports, Clinical Study Protocols, Clinical Study Reports (CSR), CMC documents, Clinical and Quality Summaries, Physician and Patient Label documents, Non-Clinical Study Reports and many others.
- **MedTech:** 510K, PMA documents
- **Safety:** Aggregate Reports such as PADER, PSUR, PBRER etc., AE narratives, Medical Queries, Clinical Safety Summary.
- **Quality:** Deviation Reports, Investigation Reports, SOPs, QMS documentation, GxP Validation deliverables.
- **Marketing:** Promotional Materials, Medical/Legal/Regulatory (MLR) review acceleration, Market Intelligence Reports and Surveys.
- **Medical Affairs:** Product Information, Scientific Publications.
- **Procurement:** RFPs, Proposals/RFP Responses, Agreements, Contract Compliance.
- **Enterprise:** Annual Reports, Contracts

Healthcare Industry:

- **Appeal Letters for Providers**
- **Procurement:** Payer-Provider contracts. RFPs, RFP Responses
- **Marketing:** Marketing content and translation
- **Enterprise:** Annual Reports, Contracts
- **Medical:** Scientific publications

Client Success Story

Acceleration of Regulatory Submissions with Agentic AI at a Large BioPharma Company

In most Life Sciences organizations, Regulatory Submissions across R&D processes are highly manual with 100s to 1000s of resources globally performing high-cost activities associated with long timelines. The time taken for manually writing documents for regulatory submissions typically takes 6-8 months in the BioPharma industry between Last Patient Last Visit (LPLV) and the Filing of the regulatory submission such as a New Drug Application (NDA), Biologics Application (BLA) to the Health Authorities such as the FDA, EMA, MHLW etc.

Life Sciences organizations have the opportunity to transform and accelerate regulatory submissions with Agentic AI and thereby bring products and life-saving therapies to market faster, besides the productivity enhancements and cost savings.

It is important that Agentic AI with AI Agents that collaborate with Regulatory reporting teams is responsible, trustworthy, transparent, explainable and ethical. IBM estimates that life sciences organizations can compress the time between LPLV and Filing to 2 months and thereby accelerate time to market for key drugs and bring life saving therapies to patients who are waiting for them globally.

This approach can also help realize
30-50% cost savings

accelerate speed to market, create competitive advantage, improve quality of submissions and transform employee experiences.

Business Benefits Realized

The following business benefits have been reported by the Business and Technical Writing teams.

- Complex submission documents such as eCTD Module 3 Chemistry, Manufacturing and Controls (CMC), Drug Substance and Drug Product documents with text, tables, charts are generated by multi-AI Agents in less than 8 mins
- Generating high quality, multi-modal content with 75-90% content coverage
- 50-75% cycle time reduction in document authoring processes



IBM Consulting Content Services Agents on your preferred Cloud

IBM Consulting offers the state-of-the-art, multi-modal content generation capability as an asset for our Clients across Life Sciences and Healthcare industries. As has been proven in the above case study, this innovative capability can help transform these industries with the power of Agentic AI @ Scale with integrated AI Governance.

Content Services Agents

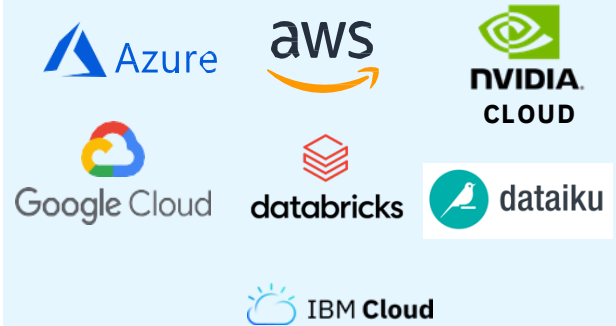
- Document Authors: Self-serviceable content and document creation at scale for any document type. Keep using your current authoring tools and workflow systems to collaborate with AI Agents.
- Business Administrators: Self-serviceable user interface to configure any use case, document/content type that the business wants to generate documents/content at scale using Content Services Agents
- Generation of multi-modal content (text, tables, charts, images etc.)
- Data integration capabilities to integrate with your disparate data sources including Veeva Vault, Documentum, Sharepoint, S3 and other data and document repositories
- Secure RAG with Role-based Access to your structured and unstructured datasets
- Deep Search AI Assistant to automate data discovery from source data
- Support of multiple RAG frameworks including any existing Enterprise RAG implementations that Organizations may have.
- Multi-LLM support for multi-modal content generation
- Network of Multi-GenAI Agents (Operational and Governance Agents) powered by LLMs to plan, generate, monitor and govern multi-modal content
- Deployable on your preferred Cloud platform (Microsoft Azure, AWS Cloud, Google Cloud, NVIDIA, Oracle AI Cloud, IBM Cloud)
- Support for HIPAA, GDPR, GxP, 21 CFR Part 11, EU AI Act

Real-time, Integrated AI Governance

- GenAI Governance Agents integrated with the Operational Agents in the Agentic workflow ensure that Security, Privacy, Quality, Regulatory, Compliance, Safety and other potential risks are identified and addressed real-time before human-in-the-loop.
- Agentic AI FinOps integrated with the Agentic AI workflows.

Supported Cloud platforms

Content Services Agents is supported on any Cloud platform that is preferred by your Organization



Content Services as Software

IBM Consulting provides Content Services Agents along with its Enablement and Support Services to Configure, Deploy and Support it on the Client's preferred Cloud platform (Microsoft Azure, AWS Cloud, Google Cloud, Oracle AI Cloud, IBM Cloud etc.), as well as train the Client Business Users on the Self-Serviceable Business Administration. Content Services Agents supports AI Governance capabilities and can be enabled with the required controls related to HIPAA, GDPR, GxP for Clients in the Life Sciences and Healthcare industries.

Content Services Agents is offered with an attractive commercial model for Client organizations.

Conclusion

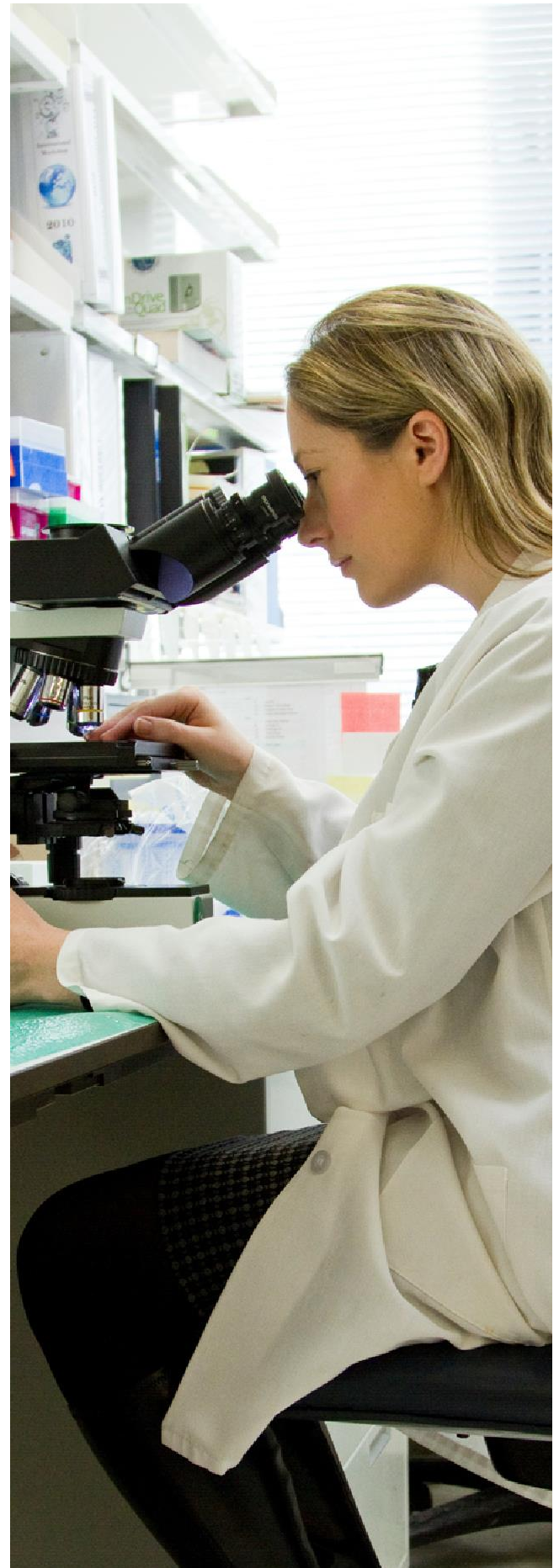
IBM Consulting Content Services Agents with real-time AI Governance, a state-of-the-art Agentic AI asset from IBM Consulting offered as Services as Software on the Client's preferred Cloud Environment has been proven to transform content authoring at scale and driving concrete business benefits such as:

- Creating Competitive Advantage for our Clients
- Bringing Products to Market faster and as a result Early realization of Revenue.
- Generating high quality, multi-modal content with 75-90% content coverage
- Agentic AI digital workers drive 30-50% cost savings and 50-75% cycle time reduction in content/document authoring processes.
- Complex technical and scientific documents generated by multi-AI Agents in less than 8 mins
- Shifting human tasks related to content authoring and review to higher value work

IBM Consulting's Content Services Agents:

Accelerates
Time to Value
by

40%



How to get started?

To learn more about Content Services Agents, view a private demo and review pricing, please contact:



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References

1. AI for Clinical Development, by Thomson Reuters and IBM, December 2024.



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