



Philip Morris International

Partnering with IBM

Orchestrating innovation
with IBM Consulting >



Leveraging technology to deliver a smoke-free future

Philip Morris International (PMI) is a leading international tobacco company, actively delivering a smoke-free future and evolving its portfolio for the long term to include products outside of the tobacco and nicotine sector. The company's current product portfolio primarily consists of cigarettes and smoke-free products.

"Turns out making the future happen is a big job," shares Steven Streitberg, Senior Solution Manager — Product Lifecycle Management (PLM) — at PMI Information Technology (IT). "How do you ensure seamless coordination across global design, development, distribution, and sales to launch and refine successful alternatives to traditional tobacco products?"

This multi-category approach required PMI to develop a new PLM system: the Cloud Lean Innovative Product Platform — also known as CLIPP. Designed in collaboration with IBM, this lean, agile platform was designed to improve and disrupt the PLM processes by driving efficiency, optimization, and best practice adoption throughout the product value chain, built on Aras Innovator®.



“CLIPP is the lynchpin of PMI’s global transformation – it’s how we keep everything traceable and aligned to nurture and protect our new product designs. And AWS enables the whole thing to be Secure, Scalable, and Resilient”

Maninder Kartik, VP IT, Product Platforms and Operations



PMI partnered with Amazon Web Services (AWS) for its next-level flexibility, security, and compliance, taking cues from leaders in pharmaceutical and medical fields. To ensure CLIPP meets stringent industry standards, IBM collaborated with AWS to develop a custom Continuous Integration/Continuous Delivery (CI/CD) pipeline, establishing a robust virtual private cloud (VPC) infrastructure based on the AWS ecosystem.

“We wanted to be copilots in control of our destiny,” confirms Steven Streitberg, Program Manager PLM. “Our IP is everything. No one else could deliver the combination of control, seamless file sharing, and ultra-secure encryption to PMI’s standard. It had to be AWS.”

CLIPP currently supports tens of thousands of monthly product changes and over 1,000+ integrations across PMI’s global operations – spanning product creation, supply chain, finance, and ERP, all the way to manufacturing, distribution and second life of products. The platform has significantly enhanced productivity across the organization and expedited time to market, all while ensuring traceability for the highest levels of compliance. Initially launched for 1,500 direct users, PMI is rolling out CLIPP to 7,000+ more over the course of 2024.

“Don’t let those relatively small user numbers fool you,” says Steven. “CLIPP is at the center of a massively integrated product lifecycle journey for PMI. From Idea to Industrialization requires teams across the world to collaborate effectively. The scalability, performance and integrations provided by AWS allows our global design and deployment teams to deliver the new product lines for PMI as if they were in one room.”



Project highlights

Seamless global coordination

With AWS infrastructure and services delivering high performance with 99.99% availability, CLIPP supports:

- **20,000+**
product changes per month
- **7,000+**
direct users
- **21,000**
impacted users
- **46**
factories integrated
- **180+**
markets supported
- **700+**
business partners
- **130+**
integrated systems





Built with

Compute Services and Networking
– EC2, Auto Scaling, Elastic Load Balancing (ELB), VPC and Route 53.

Storage and Data Services –
EBS, FSx for Windows File Server, EFS, AWS Backup, S3, File Gateway, AWS Transfer family (SFTP).

Database Services –
RDS, DynamoDB, ElastiCache, AWS Data Migration Service (DMS), Timestream, DocumentDb.

Analytics and ML Service –
Glue, Athena, EMR, SageMaker.

Container and Serverless Service –
ECS, EKS, Fargate, Step Functions, Lambda, SNS, SQS, SES.

Security Services –
Secret Manager, ACM, KMS, WAF, GuardDuty, Security Hub and Config.

Business App services –
WorkMail and AppStream 2.0.

Cloud Ops –
CloudWatch, EventBridge and Systems Manager.

Project highlights

Protecting IP

Robust encryption, multi-factor authentication, and integrated role and risk based access control protect PMI's IP at all costs – even from internal employees– while still retaining the ability to find and fix code.

- **Data confidentiality levels**
 - Integrated role based access control
 - Segregation of duties to avoid conflict / access stacking
 - Technical IT roles on exception – limited access at App and DB
- **Security measures**
 - Multi-Factor Authentication (MFA)
 - Encryption at database level
 - Encryption for data in transit
 - Data scrambling for non-production environments
- **Risk management**
 - Threat modeling
 - Penetration testing

