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Data Monetization

Is Data Monetization Creating a New
Revenue Stream for Chemical Companies?

FutureBridge

Data monetization is the method of generating incremental revenue from the available data sources or real-time streamed data by instituting the discovery, capture, storage, analysis, dissemination, and use of data. Digitization of various platforms in data gathering and processing has enabled companies to effectively monetize the gathered data.

As compared to other industries, such as agriculture, industrial products, healthcare, and automotive, the penetration of data monetization is quite low in the chemicals industry (2.8%). It is anticipated that this penetration is expected to increase in the near future.

This paper evaluates the current scenario in the chemicals & materials industry with respect to data monetization. It also analyzes current trends and their impact as well as examines various operating models and their adoption by the chemicals & materials industry.

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Introduction – What is Data Monetization?

Data monetization is the method of generating incremental revenue from the available data sources or real-time streamed data by instituting the discovery, capture, storage, analysis, dissemination, and use of that data.

Digitization of various platforms in data gathering and processing has enabled companies to effectively monetize the gathered data.

Current Scenario – What is Happening in the Chemicals Industry?

For an industry that employs around 20 million people globally, low data monetization level has been a concern lately. However, companies such as Evonik and Monsanto in the chemicals domain have successfully implemented data monetization.

In terms of adoption, agriculture leads among all industries, with penetration of nearly 25%, followed by industrial products (16.7%), healthcare (5.6%), and automotive (5.6%). As compared to other industries, the penetration of data monetization is quite low in the chemicals industry (2.8%). It is anticipated that this penetration will increase in the near future.

Changing Trends – Movement from Traditional to Futuristic Approach

Stages	Traditional/Past Scenario	Current & Future Scenario
Data Acquisition	Sourced from company operations in batches	Sourced from IoT and various public domains in real-time
Data Processing & Storage	Pre-processed data is stored in data warehouses and hosted on-premise	Data stored in raw form on cloud and available on demand
Data Consumption	Used by few analysts; New data acquisition takes weeks/months	Rapid and responsive processing at multiple endpoints
Data Management and Governance	Addressed only structured data	Can be customized according to the type of data

Across industries such as agriculture, industrial products, healthcare, and automotive, wherein the adoption of data monetization has been quite impressive, companies are moving from traditional to futuristic approaches; however, in the chemicals industry that has recently adopted data monetization, companies are starting with the latest futuristic approaches. *Source: Feedough (2019) and MITSolan (2018)*

Operating Models – What is Being Adopted by the Chemicals Industry?

There are multiple operating models for data monetization, based on different features associated with them.

**EXHIBIT 1: Comparison of Costs and Benefits across Models and Industries**

| Model		Syndication Model	Data Revenue Model	Subscription-based Model	Outcome-based Model
Cost	CAPEX	✕	✓	✓	✓
	OPEX	✓	✓	✓	✓
Benefits	Incremental Value	✓	✓	✓	✓
	Customer Intimacy	✕	✕	✓	✓

Note: *CAPEX:* It comprises the cost of application development, hardware (sensors, etc.), and infrastructure (system, servers, etc.).
*OPEX:* It includes cloud (software, platform, and storage), connectivity, web application update, skilled labor, etc.
Customer Intimacy: Better customer experience and engagement can be achieved. Revenue growth can be achieved by enhancing the value delivered to the end customer.

Model	Syndication Model	Data Revenue Model	Subscription-based Model	Outcome-based Model
Chemical			MONSANTO	EVONIK POWER TO CREATE
Agriculture	Low		Moderate	Moderate
Automotive			High	
Financial		Moderate		Moderate
Healthcare		Moderate	Moderate	
Industrial Products			Moderate	High
Oil & Gas			Moderate	High
Information, Communication, and Technology				High
Other Industries			High	Moderate

■ High (>60 percent)   ■ Moderate (30 – 60 percent)   ■ Low (<30 percent)

Source: FutureBridge Analysis

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Across industries, the subscription-based model is the most preferred operating model, as it facilitates customization of data with desired outcomes. A few companies that have adopted the subscription-based model include Schneider Electric, John Deere, Flowserve, Trellis, Komatsu, My Smartfarm, BovControl, Dawex, Loqate, Chevrolet, etc.

In the chemicals industry, both subscription- and outcome-based models are being adopted; however, the outcome-based model is preferred the most, as it enables incremental income and develops customer intimacy.

Evonik has adopted the outcome-based model for the feed industry, while the subscription-based model is adopted by Monsanto for soil and weather analytics. *Source: KPMG (2015) and Infosys*

Data Monetization Approach – How Chemical Companies Can Adopt?

The foremost step in data monetization is to identify the data that is valuable. The next step is to plan the approach in terms of offering type and go-to-market. These can be achieved through three basic offerings, namely (in order of increasing complexity):

- Raw Data
- Raw Data Plus
- Integrated Data

EXHIBIT 2: Three Steps of Offerings and their Features

	Offerings	Features
	Raw Data (Data in the most basic/ raw form)	▪ Most flexible ▪ Lowest revenue potential ▪ Requires maintenance and access to robust data set ▪ Customers will need capabilities to extract value from the data
	Raw Data Plus (Raw data form is processed to offer search functionality, basic analysis, and insights)	▪ Greater revenue potential ▪ Added search interface and simple data cuts ready-to-use ▪ Specialized expertise required to manipulate and drive useful insights from raw data
	Integrated Data (Tech-enabled, analyzed data to provide detailed analysis and insights)	▪ Most challenging business model to implement ▪ Requires expertise to design data-driven workflows or entirely new service offerings ▪ Requires a high degree of customer knowledge and insights ▪ Needs robust development and reliable service delivery

Source: Oliver Wyman (2016)

Types of Data – Which data can be monetized?

There are generally four types of data that can be considered for monetization:

1. *Unstructured Internal:* (e.g., customer relationship management, textual data, as well as maintenance logs and emails)

2. *Structured Internal:* (e.g., financial, production, distribution, sales and delivery, adoption rates, clicks, and conversion data)

3. *Unstructured External:* (e.g., news, analyst reports, blogs, and social media data)

4. *Structured Internal:* (e.g., syndicated industry data as well as demographics and public market performance) *Source: KPMG (2015) and Infosys.*

Use Case Analysis – *Monsanto*

MONSANTO

What was the problem area?

Monsanto identified key problem areas, such as unpredictable weather and soil conditions, which are affecting the overall yield of farming.

How has the company approached the opportunity with data monetization?

The company acquired Climate Corporation that provides farm intelligence software, which integrates precision agriculture sensors and systems to deliver intelligence regarding the current and future weather, soil, and crop conditions.

The product enables farmers to design optimal planting environments for new farms or select crops that are optimized to acquire maximum yield on the existing farms.

Which operating model has been adopted?

As an approach to data monetization, Monsanto adopted the subscription-based operating model.

What is the outcome?

By 2015, >75 million acres enrolled in the "CLIMATE FIELD VIEW" platform, including >5 million acres subscribed premium offerings.

By 2018, the platform achieved more than 120 million acres of subscription with 100,000 customers across the US, Brazil, and Canada.

The company is targeting 300-400 million acres of subscription by 2025.

What are the service offerings and subscription packages?

Package	Charges	Services
Field View Prime	Free	Weather, scouting, simple data visualization, field summary data, data inbox, and cloud storage
Field View Plus	Free for new users, there onwards US $999/year	Yield analysis, field region reports, field health imagery, manual seed scripting, manual fertility scripting, side-by-side visualization, and remote view
Field View Pro	US $3/acre	Advanced seeds prescription
	US $3/acre	Sub-field nitrogen monitoring services
	US $4/acre	Bundled, including both of the above

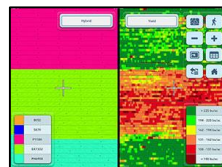*Image: climate.com*

CLIMATE
FIELD
VIEW

Interface

Image: amazonaws.com

Source: Amazon (2018)

Future Scenario – Increasing Adoption in the Chemicals Industry

The data monetization market has been expanding due to the increase in the volume of data across industries. The market for data monetization is expected to reach US$708 billion by 2025, at a CAGR of ~21%, over a period of 7 years.

The chemicals industry is also likely to witness significant growth in terms of data monetization adoption; a few of the companies have already initiated working on the implementation of the outcome-based data monetization model. *Source: Globe Newswire (2018)*

Key Drivers – What is Driving the Adoption?

The growth in the data monetization market is primarily driven by the continuous rise in enterprises data, technological advancements in big data & analytics solutions, and focus of organizations to generate new revenue streams. In addition, increased awareness regarding the potential benefits of data monetization solutions and their adoption are expected to provide lucrative opportunities for further growth.

Key drivers of data monetization can be listed as follows:

- Need to deal with a high volume of unstructured and structured data
- Decline in the storage cost due to the adoption of cloud
- Improvement in business intelligence processes by applying data analytics

Source: Oliver Wyman (2016) and KPMG

Conclusion – FutureBridge's Takeaway

The penetration of data monetization is presently quite low in the chemicals industry; however, the future looks promising.

Considering factors such as growing awareness and increasing adoption in companies, it is highly evident that within the next few years, the chemicals industry will witness a significantly higher penetration of data monetization.

Hence, it can be concluded that data monetization will emerge as a new stream of revenue generation for chemical companies in the near future. It will be interesting to analyze the impact of data monetization on various aspects of businesses.

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