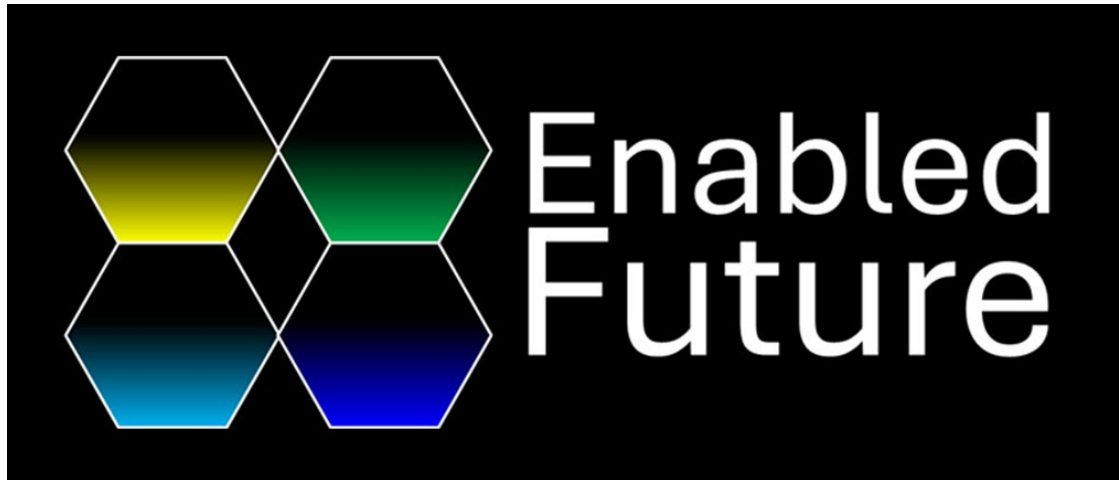


Optimising Technology Portfolios for a Sustainable Future

Company Brochure, Q3 2024

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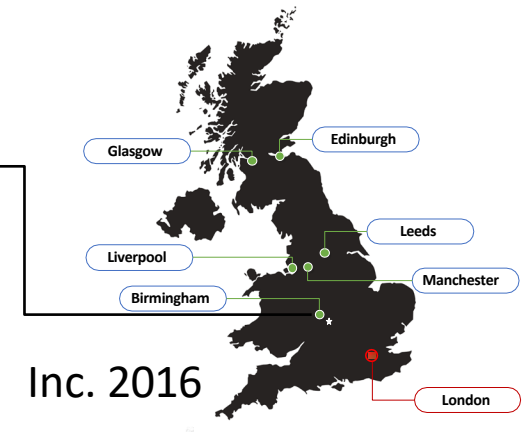
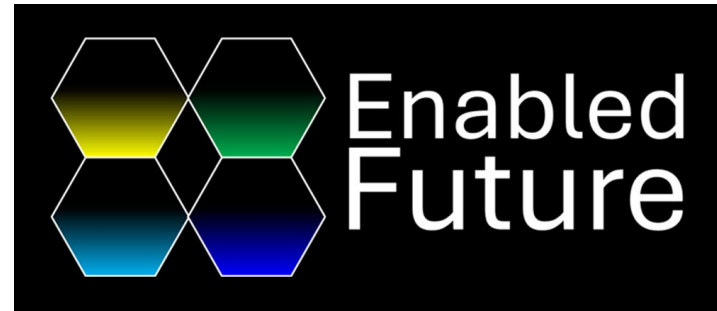
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PGM Catalysts for Fine Chemicals Subscription

About EnabledFuture



EnabledFuture Limited (**EnabledFuture**), incorporated in 2016 is committed to **Optimizing Technology Portfolios for a Sustainable Future.**

The company provides expert consultancy and actionable insights in the fields of green chemistry, catalysis, batteries, hydrogen, valuable metals and the circular economy.

Through provision of bespoke reports, subscription services, training and industry events we offer a flexible range of solution for a broad client base along the supply chains of our market sectors.

Key Clients



Meet the Team



Dr Michelle Lynch, CChem FRSC
CEO, EnabledFuture

The EnabledFuture team combines a unique blend of deep technical expertise, strategic foresight, and hands-on industry experience, making them a powerhouse in driving sustainable innovations all the way to world scale plants.

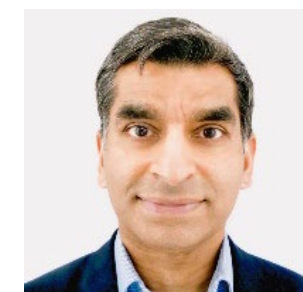
With decades of collective experience across chemicals, catalysis, battery materials, and circular economy, our team is uniquely positioned to deliver on the company's vision with the depth and quality required by our discerning client base.



Dr Dhivya Egambaram,
Intern (Battery Materials), EnabledFuture



Dr Rob Parry
Non-Executive Director



Dr Satheesh K Pillai
Global Partner

Meet the EnabledFuture CEO



Dr Michelle Lynch, CChem FRSC
CEO, EnabledFuture

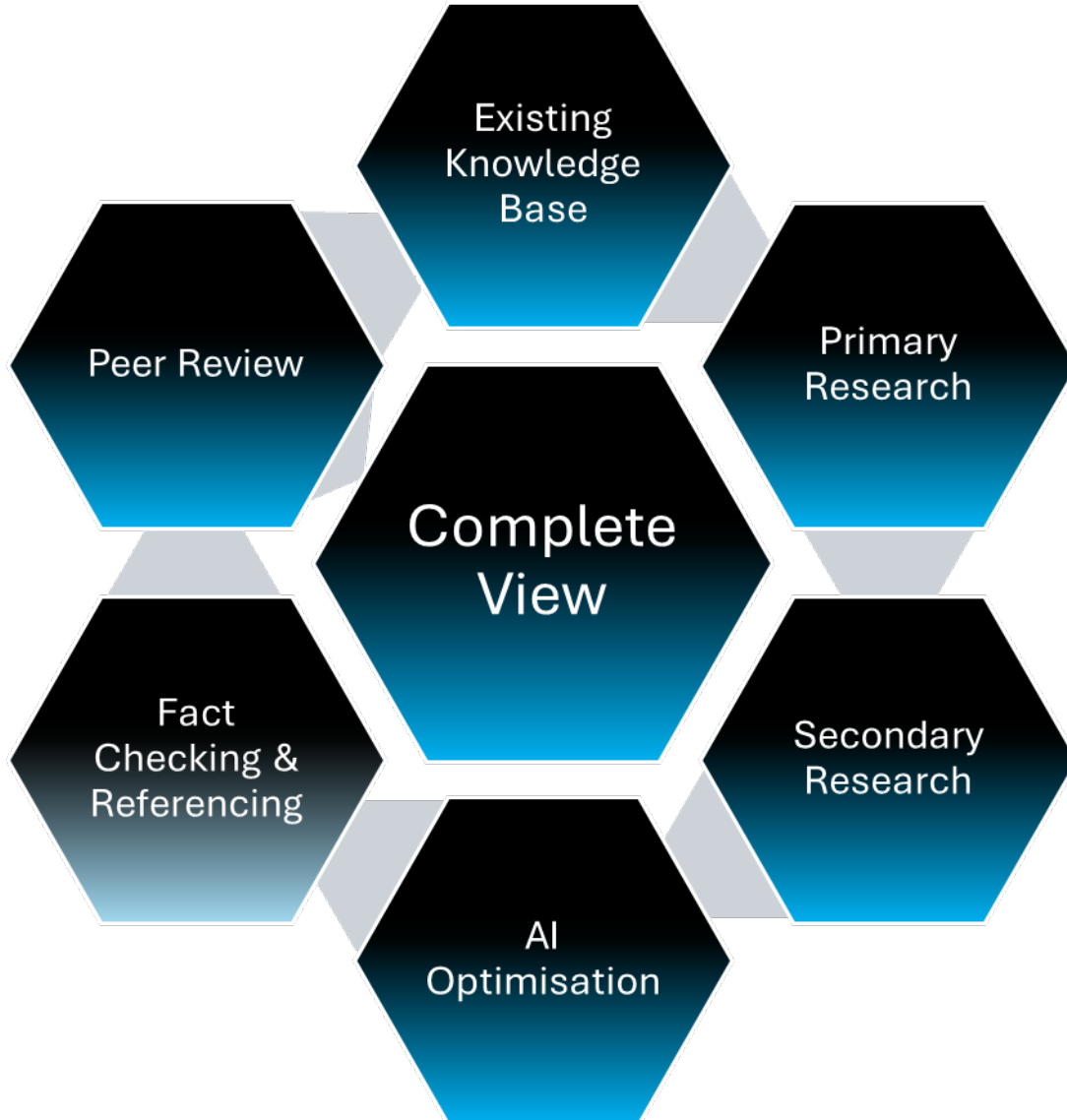
Dr. Michelle Lynch, CEO of EnabledFuture, is a visionary leader with over 27 years of expertise in chemicals, catalysis, and sustainable technologies.

She has been instrumental in driving low carbon technologies by guiding clients across the chemicals, metals, and energy sectors toward sustainability and profitability. Under her leadership, EnabledFuture has become a pioneer in optimizing technology portfolios, making significant advancements in areas such as green chemistry, catalysis, battery supply chains and the circular economy.

Michelle sums up EnabledFuture's vision as follows:

"At EnabledFuture, we are not just consultants; we are partners in progress. Our mission is to empower our clients to lead in sustainability while maximizing their profitability. I believe that by leveraging innovative technologies and strategic foresight, we can create a future where economic success and environmental responsibility go hand in hand."

EnabledFuture's Consulting Approach



- EnabledFuture has a robust methodology for gathering the necessary insights for each of its reports and services.
- Each new assignment builds on the company's existing knowledge base.
- New insights are then developed through primary research with industry participants and expert searching of public domain information including a large number of web sources, patents and literature.
- The output is optimized in conjunction with AI models, then thoroughly fact checked, referenced and peer-reviewed.
- The end result is a complete view of the assignment scope of work enabling clients to develop Optimised Technology Portfolios for a Sustainable Future.

EnabledFuture Value Proposition



EnabledFuture's insights on critical metal value chains enable clients to scale sustainable technology portfolios.

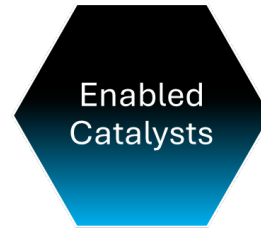


Without these valuable metal resources, the global transition to a cleaner, more resilient economy would not be possible.

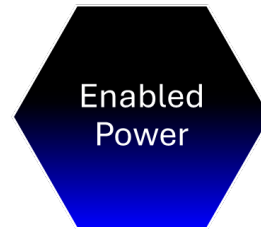


Critical metals and low carbon technologies are essential building blocks of the energy transition and sustainable supply chains.

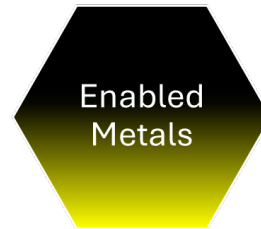
EnabledFuture Market Verticals



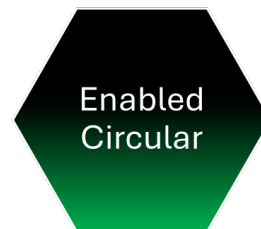
Catalyst technology for circular lifecycles of chemical building blocks, specialty & fine chemicals, energy carriers & biorenewables



Enabling technologies for clean power value chains including rechargeable batteries, fuel cells, electrolysers & solar photovoltaics



Sustainable technologies for circularity in high value platinum group metals (PGM), battery metals & other critical energy metals ⁶



Circular Economy focus for production of polymers, plastics, rubbers, fibres from renewable feedstocks and waste fractions

Problems We Solve at EnabledFuture



Case Study	PGM Refining Sales Growth	Fuel Cell Recycling	Future Battery Chemistry Landscape
Problem	Platinum Group Metal (PGM) demand in the fine chemical sector is not well understood and supply chain companies including catalyst producers and refiners needed more granularity and market size data.	Fuel cell deployment is on the increase and when the systems reach end-of-life (EOL) they need to be recycled. Recyclers need to understand the market potential and entry strategies in order to develop an offering for this area.	Supply chain participants and stakeholder organizations' need to understand the trajectory of battery chemistries so that they can ensure critical metals and minerals mining and processing levels can meet future demand.
Solution	We provided a detailed report and database of the fine chemicals production landscape and locations where PGMs are most utilized. The granularity down to plant and single molecule level was a market first from a consulting company.	We provided a methodical review of the fuel cell and electrolyser industry including a granular view of the supply chain, market, IP position and developing technologies for recycling PGM catalyst coated membranes and other valuable components.	We provided a stakeholder organization with several reports on battery materials and the effects of the changing landscape on metal demand. This information has been utilized as part of initiatives to help its member companies to plan metal output for the battery sector.
Client Benefit	Clients have prioritized sales efforts and informed decision makers on how they can improve their PGM recovery and returns with their services.	The client utilized the information to lead R&D efforts and has already begun to scale recycling fuel cells at its plant in Germany.	The stakeholder organization utilized the report as part of initiatives to help its member companies to plan metal output for the battery sector.
Sustainability Benefit	Waste reduction, improved lifecycle footprint of PGM catalysts	Timely introduction of recycling options and capacity for fuel cells	Enabling more stability in critical metal supply chains and pricing

EnabledFuture Products & Services



Consulting Services: Empower your business to make sustainability achievable with our expert consulting services, offering strategic insights in technology deep dives, supply chain analysis, techno-economic evaluation, intellectual property analysis, lead generation and competitor benchmarking.



Multi-Client Reports: Access comprehensive multi-client reports that provide in-depth analysis and strategic foresight on critical markets, including PGM catalysts and petrochemical technologies.



Training Programs: Enhance your team's capabilities with our specialized training programs in emerging technologies including petrochemicals, renewables, catalysts, hydrogen, sustainable aviation fuels, and the world of rechargeable batteries.



Industry Tracking: Stay ahead with our industry tracking services, offering real-time insights on battery materials, recycling of batteries, fuel cells and solar PV, or custom industries on request.



Thought Leadership: Lead your industry with cutting-edge knowledge from our thought leadership content, covering batteries, catalysts, green chemistry, CO2 utilization, metal circularity and other custom topics on request.

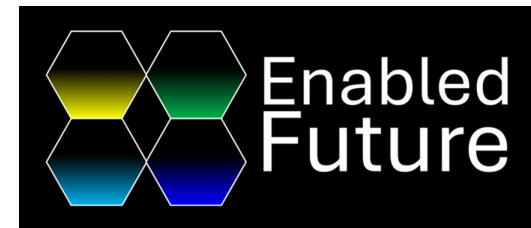


Industry Events: Join us for our conference & expo events in the battery, energy storage and advanced materials and engineering sectors. Our speaker lineups including prestigious industry leaders and academic experts. Exhibition spots are available at highly competitive prices!

EnabledFuture Training Courses



**Petrochemicals,
Sustainable Fuels**



**Catalysis, Circular Economy,
Critical Metals**

I.M3 Institute of Materials,
Minerals & Mining

Hydrogen, Batteries

EnabledFuture Training Course Suite



6th Nov 2024:

26th Feb 2025:

Introduction to Rechargeable Batteries

Planning for the Future - The Power of Hydrogen

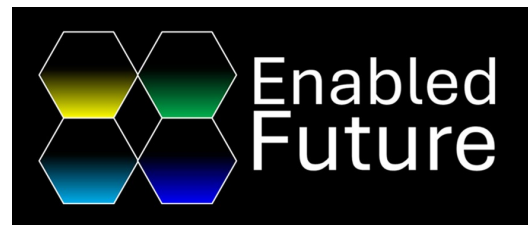


23rd-25th Oct 2024:

28-31st Oct 2024:

Sustainable Aviation Fuels: Transforming the Future of Aviation (VIRTUAL)

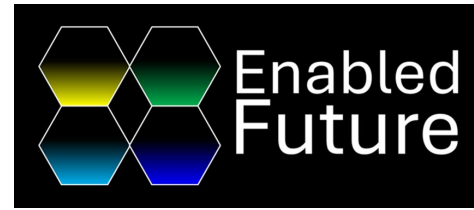
The International Petrochemicals Business - Technology, Markets and Economics (VIRTUAL) - CH0V



Spring 2025:

Courses will be available on EnabledFuture's market vertical areas (catalysis, power, circular economy and valuable metals. More details tba.

EnabledFuture
Thought
Leadership



**Special Features:
Catalysis, Circular Economy, Batteries,
Hydrogen, Critical Metals**

**Thought Leadership Mini Reports:
Niche Battery Markets (Aviation,
Aerospace, UPS, Robotics, Others)**



**Special Features:
The Catalyst Review**

Thought Leadership Articles



Future Uses of Platinum Group Metal (PGM) in Chemical Catalysts



The above editions of The Catalyst Review, containing EnabledFuture's Special Features are available to read on request.

EnabledFuture Battery Thought Leadership Reports



Executive Summary



Market Overview &
Outlook



Technology Review
& Patent Analysis



Commercial Case
Studies



Strategic Analysis &
Insights

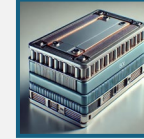


Take Home
Messages

EnabledFuture Industry & Patent Tracking Databases



Battery Electrode
Materials



Solid State
Batteries



Rare Earth Magnets



Battery Recycling



Fuel Cell Recycling



Solar PV Recycling

Checkout Our Next Event!

EnabledFuture Industry Conference & Expo



**The 1st West Midlands Battery
EcoSystem Conference & Expo**
An EnabledFuture Event

Event Brochure

To register for a **FREE** pass, scan the displayed QR Code



Date: 4th November 2024
Location: MTC Coventry
Time: 8.30 am - 4.30 pm

Proudly sponsored by:  **EVERA**
RECRUITMENT

WMBE 2024  Enabled Future

PGM Catalysts For Fine Chemicals Markets & Technologies Subscription Service

PGM Catalysts for Fine Chemicals Subscription



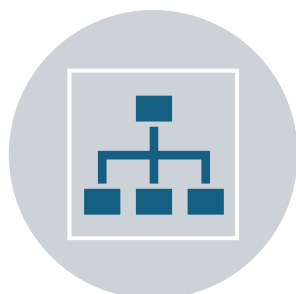
Geographic Coverage	Pharma	Agrochem	Aroma Chemicals	Others
Europe	●	●	●	●
NAFTA	●	●	●	●
India	●	●	●	●



The information and insights contained in this service allow for the identification of key priority opportunities for catalyst sales, PGM sales and refining and other supply chain products for production of fine chemicals with homogeneous and heterogeneous PGM catalysts.



The deliverables consist of a Management Slide Deck and an Excel Database delivered each quarter. The current coverage is for Europe, NAFTA and India. New regions are being added upon request.

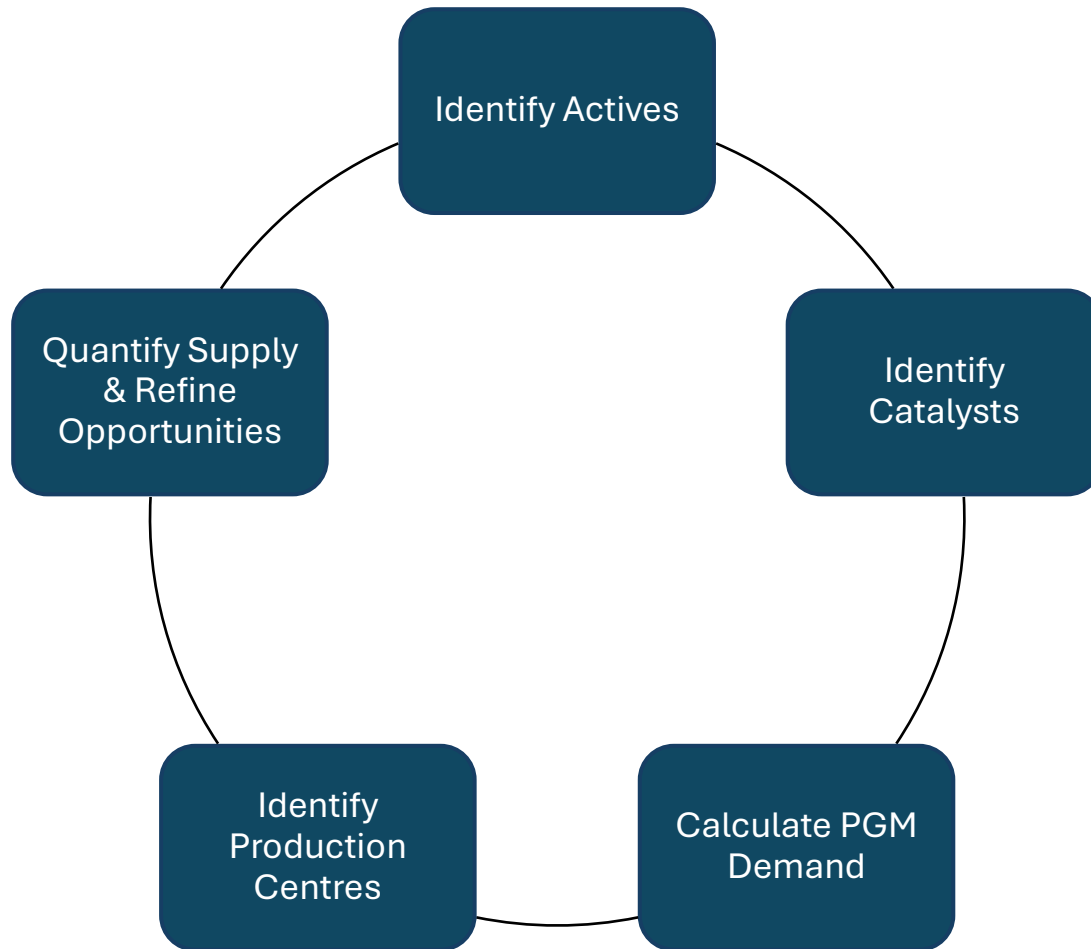


The Management Slide Deck includes an executive summary, methodology, granular profiles of actives producers, their capabilities and pattern of PGM usage.



In addition, a view of each area of actives where PGM catalysts are used e.g. small kinase inhibitors in the pharma market and SDHI fungicides in the agrochemical market. Thereafter a strategic analysis is provided and key client recommendations.

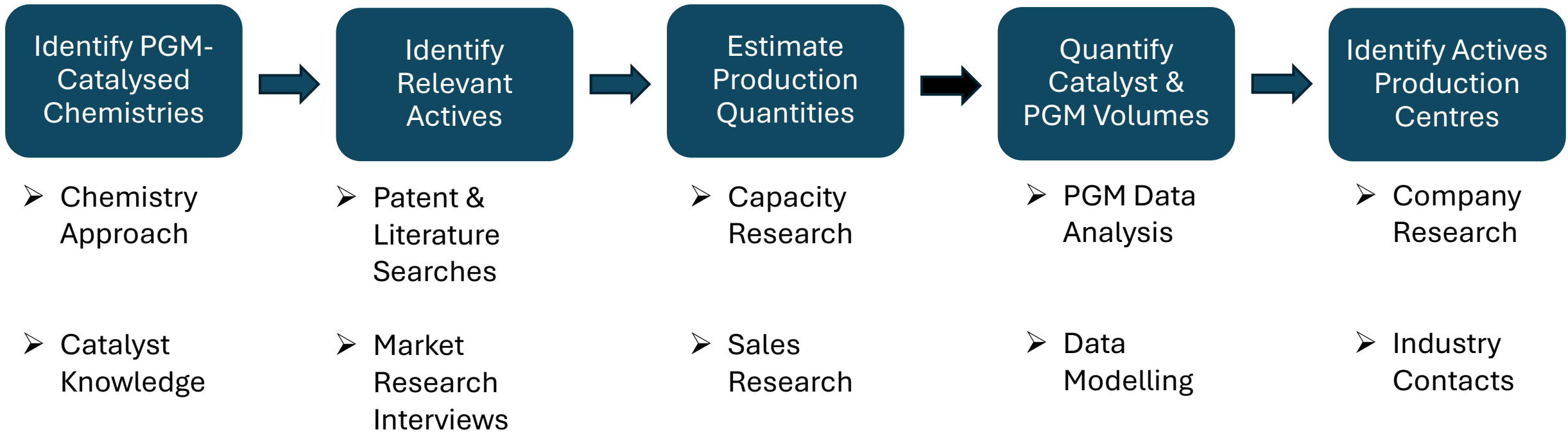
Mapping PGM Catalyst Supply Chains



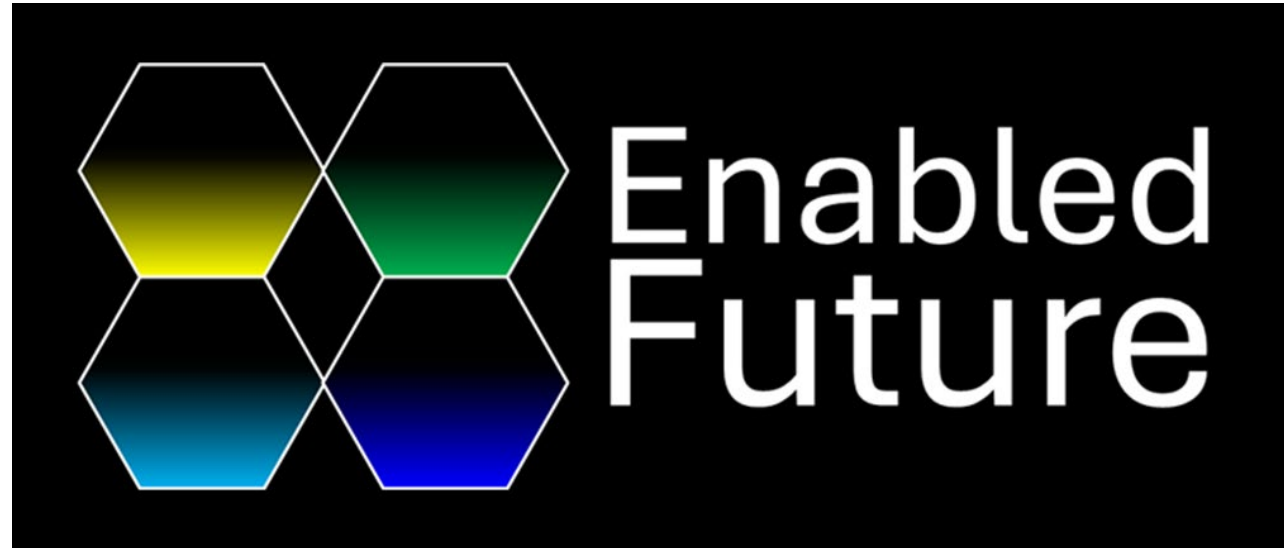
➤ **Excel Database**

- Drug & Actives brand and generic names
- Actives CAS-NO's
- Actives Sales, \$, tons
- Active Synthesis Patents
- Active Producers Site by Site Profiles
- Actives Mapping – Catalysts & Production Locations
- Catalyst Types
- Catalytic Reactions
- Global Catalyst & PGM Demand by Active and Metal
- Patent Lists by Molecule and Company

Information Methodology



Visit EnabledFuture's Web Site for More Details!



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www.enabledfuture.com