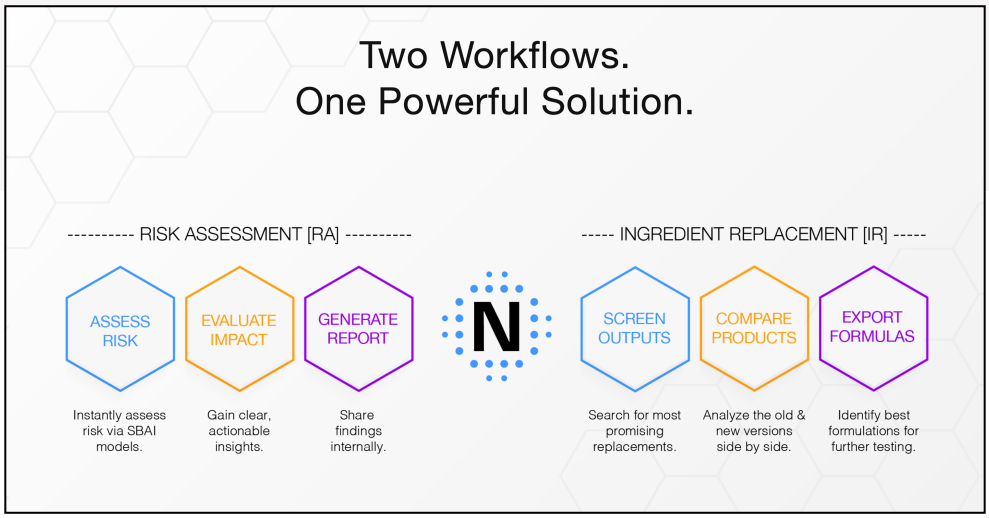
NOBLEAI

Risk Assessment + Ingredient Replacement (RAIR) Solution



About NobleAI

NobleAI offers commercially-proven AI solutions for Material Informatics and Energy powered by its unique Science-Based AI technology. Our Science-Based AI models are developed quickly, securely, and specifically for each customer and given use case. Delivered via our powerful, cloud-based Visualizations, Insights, & Predictions (VIP) Platform, NobleAI delivers actionable insights to accelerate product development and reduce costs while improving product performance, sustainability, and reliability. NobleAI is supported by investments from world-class organizations such as Microsoft, Chevron, and Syensqo (formerly Solvay), and our solutions are already delivering real value in production deployments at leading chemical, material, and energy companies around the globe.

Risk Assessment + Ingredient Replacement

The NobleAI Risk Assessment (RA) service empowers teams to rapidly identify and evaluate risks in product formulations, while the Ingredient Replacement (IR) module delivers real-time, safer alternatives for hazardous or unsustainable components. These tools enable data-driven decisions that ensure product safety and sustainability without sacrificing performance.

Together, RA and IR on the Noble VIP Platform offer a comprehensive solution to accelerate development timelines, meet regulatory requirements, and maintain product excellence—all achieved in minutes instead of months.

Risk Assessment (RA)

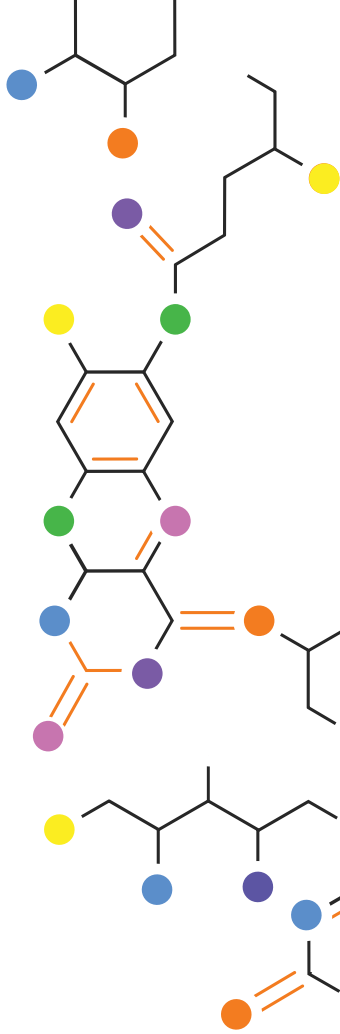
Substance Risk Evaluation
Analyze substances to identify potential physical, chemical, and environmental hazards.

Toxicology Data Integration
Integrates toxicology databases and regulations to provide comprehensive toxicity information.

Regulatory Compliance Checker
Cross-checks substances with global regulations to ensure compliance with hazardous substance rules.

AI-Powered Risk Prediction
Predict risk profiles of substances using machine learning models based on chemical properties.

Automated Reporting
Generate and export risk assessment reports for decision making and team-wide collaboration.

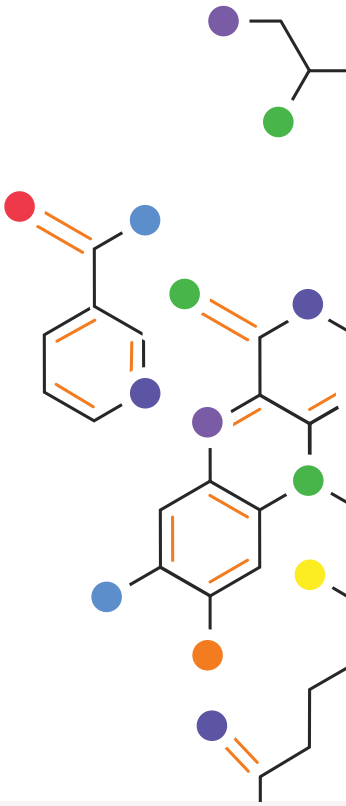


Ingredient Replacement (IR)

New Inverse Design Job Type
Access ingredient replacement optimization directly within existing job workflows.

AI-Driven Replacement Solutions
Predict alternative formulations using machine learning while preserving key properties.

Formulation Property Matching
Retain critical formulation characteristics like viscosity, stability, and performance.

Formulation Comparison Insights
Compare old and new formulations based on safety, performance, and cost.

Regulatory Compliance Integration
Ensure suggested formulations meet global and regional regulatory standards.