



Wison Engineering Ltd.

📍 633 Zhongke Road, Zhangjiang, Pudong,
Shanghai, 201210, P.R.China

☎ 86-21-20306000

✉ wisonmarketing@wison.com

🌐 wison-engineering.com



🌐 Website



in LinkedIn

Flex-to-X

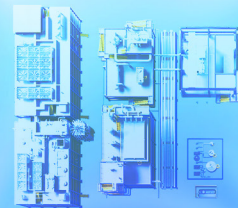
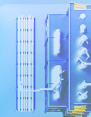
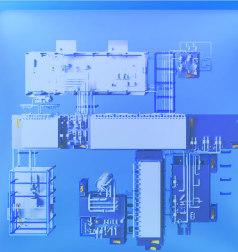
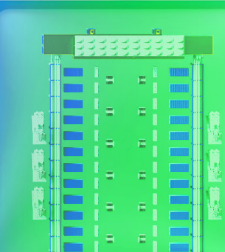
Integrated Engineering Product Platform for
Green Molecules

Predictable

Repeatable

Configurable

Scalable



Flex-to-X

Industrializing Green Molecules

A Plant-as-a-Product platform that combines digital optimization, standardized engineering and modular delivery to turn variable resources into repeatable green-molecule plants.



CUSTOMER VALUE

Each new project can be deployed faster, with greater certainty and stronger economic competitiveness and bankability.

1



8,760-Hour Optimization

ReIPS optimizes renewable power, BESS, electrolysis, hydrogen storage, downstream synthesis and facilities and utilities as one integrated system.

2



Controlled Customization

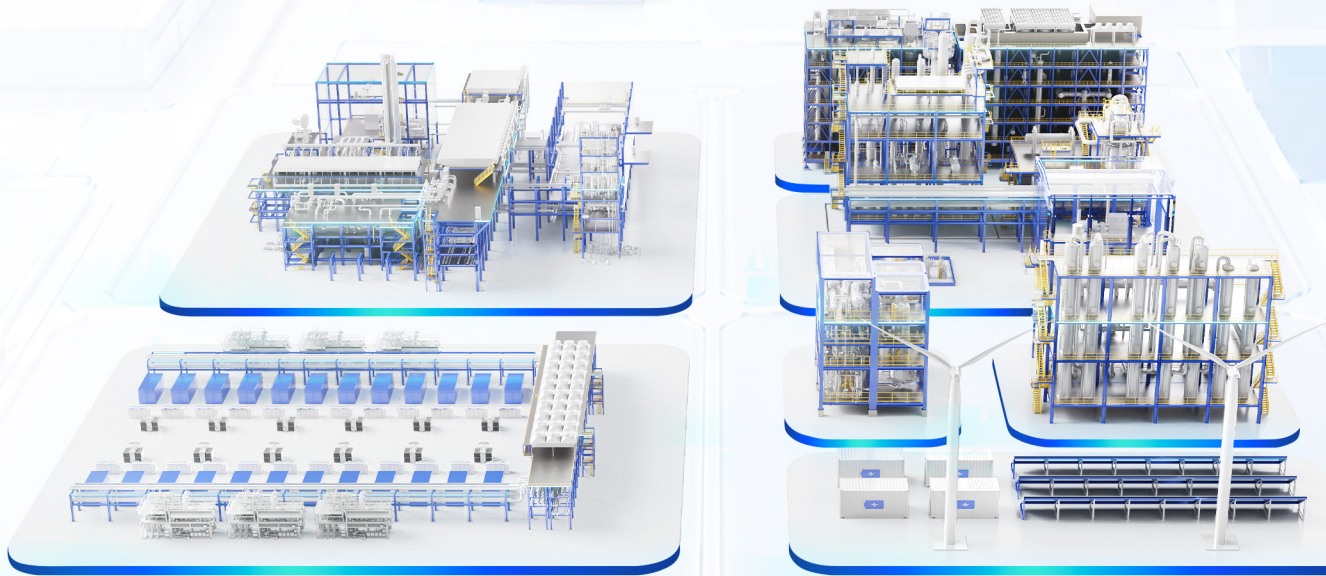
Standardized capacity, architecture and modular interfaces that adapt to diverse resource conditions, climates, standards, and market requirements.

3



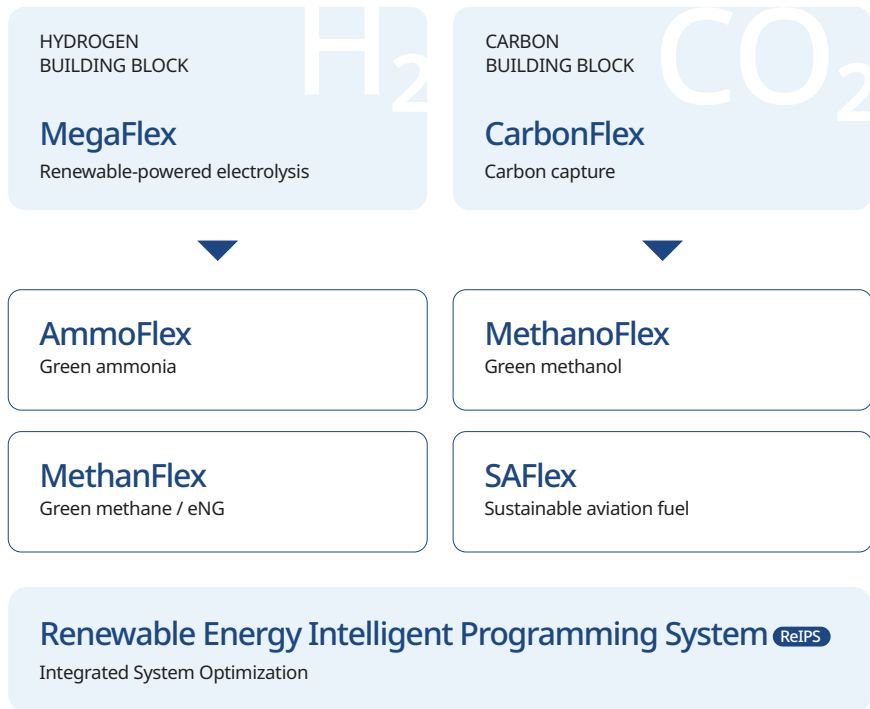
Productized Delivery

Repeatable engineering, module fabrication and supply-chain integration improve cost, schedule and execution certainty.



Industrializing Green Molecules

STRATEGIC ARCHITECTURE



Traditional Stick-built EPC

Project-specific, site-intensive execution



Engineering approach

Project-specific engineering

Each project is largely a new design, with limited standardization.



Construction & delivery

Onsite stick-built construction

Most construction work is performed on site, with high dependence on local conditions.



Schedule certainty

Higher schedule risk

Subject to weather, local resources, and on-site construction productivity.



Cost structure

Higher exposure to cost variation

More sensitive to site conditions, labor availability and supply chain uncertainties.



Quality & safety

Greater on-site variability

Higher dependence on local construction quality and site HSE performance.



Adaptability & scalability

Project-by-project learning

Limited reuse of engineering and construction experience.

Flex-to-X

Configurable, modular and industrialized delivery

Reusable, configurable engineering

Standardized core design with flexible configuration to adapt to different locations and requirements.

Modular fabrication and integrated delivery

Major process units are prefabricated in controlled yard environments and delivered as modules for rapid installation.

Shorter and more predictable schedule

Parallel fabrication and site preparation reduce on-site work and improve schedule certainty.

More controlled cost structure

Industrialized fabrication, standardized design and integrated supply chain improve cost predictability.

Improved quality and safety performance

Factory-based fabrication in controlled environments enhances quality, safety, and consistency.

Global replication with local adaptation

A productized platform enables faster replication across regions, with adaptation to local standards and conditions.

Renewable Energy Intelligent Programming System **ReIPS**

Optimize the System - Not Individual Equipment

Wison's intelligent planning and simulation platform for green-molecule projects, connecting resource data, plant configuration, hourly operation and project economics.

1 8,760-Hour Optimization

Year-round dynamic simulation across renewable power, BESS, electrolysis, hydrogen storage and downstream synthesis.

2 Capacity + Dispatch

Plant capacity is programmed on the basis of non-linear and multi-objective optimization.

3 Decision-Ready Outputs

Capacity configuration, CAPEX / OPEX, levelized cost of product (LCOP), carbon footprint and sensitivity analysis — all in one platform.



PROOF POINT

Applied to more than 20 Power-to-X projects worldwide.



CUSTOMER VALUE

Turning variable renewable resources into decision-ready, investment-ready engineering insights.



MegaFlex

"Plant-as-a-Product" - A Turnkey Solution for Green Hydrogen Plants

Breaking away from traditional engineering models, an integrated green-hydrogen solution combines system optimization, standardized design, and modular delivery to turn complex "engineering projects" into rapidly replicable "standardized products".



CUSTOMER VALUE

A standardized core combined with flexible configuration — enabling faster replication and scalable deployment.

1



System Optimization

ReIPS optimizes source, storage and load, achieving a plant-wide optimum across renewable power, energy storage and hydrogen production.

2



Flexible Hydrogen Production

Intelligent control and wide-load operation, with rapid response to renewable power variability.

3



Controlled Customization

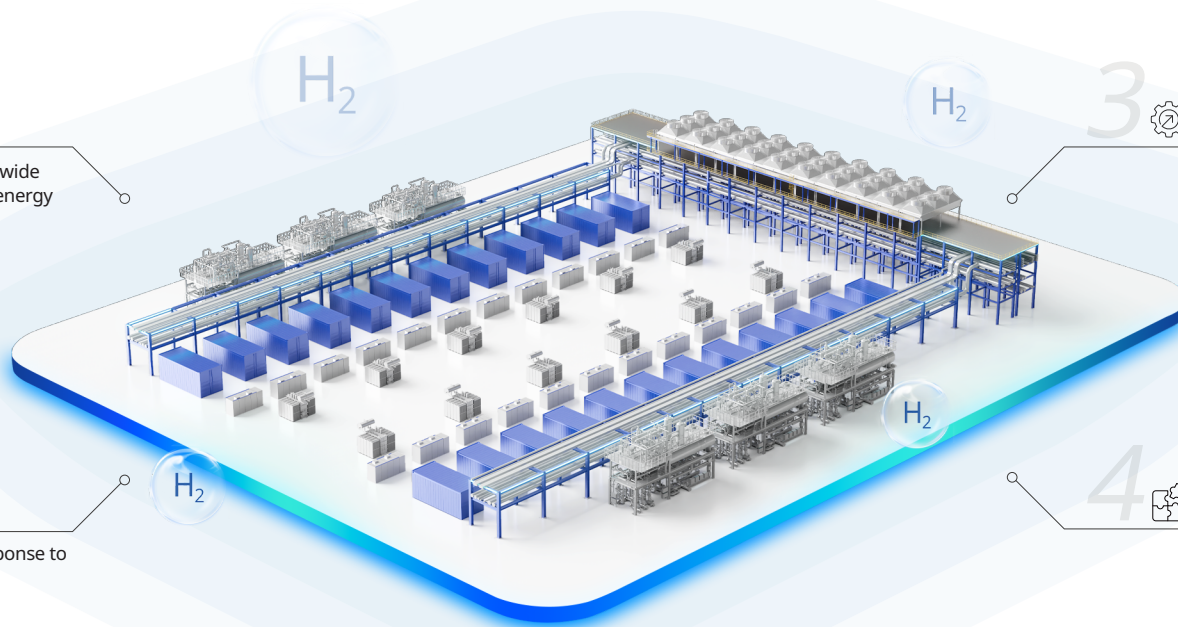
A standardized platform with flexible configuration, available in high-temperature, cold-climate and water-saving versions for diverse environments.

4



Modular Delivery

Yard prefabrication and modular delivery significantly reduce on-site construction work, shorten delivery schedules and optimize cost.



AmmoFlex

Flexible Green Ammonia

A standardized green-ammonia solution engineered to operate with variable renewable power.

1



10%–110% Dynamic Operation

Flexible synthesis reduces losses from frequent start-stop operation.

2



Higher System Efficiency

Reaction heat is recovered and integrated across the plant.

3



Optimized Hydrogen Storage

AI-driven modeling optimizes storage dispatch and capacity sizing, reducing hydrogen storage capital requirements.

4



Productized FEED Packages

Two configurations: a 200 ktpa stick-built design and a 300 ktpa highly modularized design.



CUSTOMER VALUE

From variable green power to stable, replicable green-ammonia production.



MethanoFlex

Flexible Green Methanol

A standardized green-methanol solution designed to follow renewable-power variability while maintaining efficient plant operation.

1 

30%–100% Dynamic Operation

Wide-load operation adapts production to renewable-energy variability.

2 

Dynamic Control

Optimized control strategies maintain strong conversion and energy efficiency across different operating conditions.

3 

Heat-Pump Distillation

Combining with process technology, the self-developed heat pump distillation minimizes the utility demand.

4 

Multiple Pathways

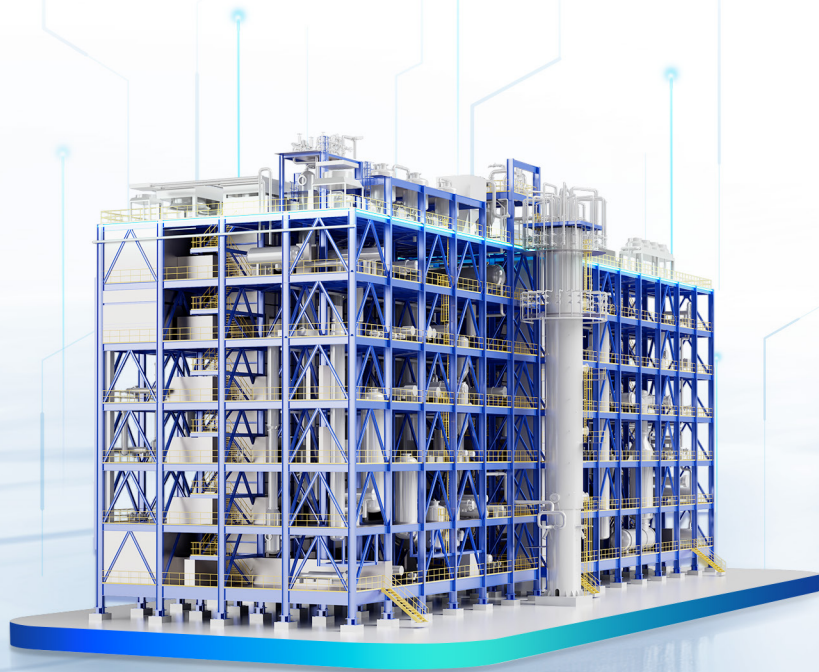
Compatible with routes including biomass gasification and biomethane reforming and e-synthesis.



SAFlex

Industrializing Sustainable Aviation Fuel

A standardized engineering solution integrating green hydrogen, captured CO₂ and key fuel-synthesis processes for scalable SAF deployment.



CUSTOMER VALUE

A repeatable engineering architecture designed to shorten the path from SAF concept to industrial deployment.

1



Integrated Process

Reverse water-gas shift, Fischer-Tropsch synthesis and oil upgrading are engineered as one solution.

2



Plant-Wide Optimization

AI supports energy distribution, process control and equipment dispatch.

3



Modular Delivery

Highly modularized execution reduces site work and compresses construction schedules.

4



Pathway Flexibility

Can integrate with pathways such as biomass gasification.

MethanFlex

Productized Green Methane / eNG

Wison's green-methane solution combines a once-through methanation process with standardized, productized skids.

1 

Once-Through Methanation

No recycle compressor is required for temperature control.

2 

Simplified Process

Reduced equipment and recycle duty
lower energy use and capital requirements.

3 

Flexible Operation

Designed for renewable variability
with wide-load and fast-response operation.

4 

Standardized Skids

60 / 120 / 200 MW equivalent
electrolyzer-capacity series for
prefabricated, rapid deployment.



CUSTOMER VALUE

The process technology plus standardized products for faster, repeatable eNG deployment.



CarbonFlex

Modular Carbon Capture

A modular carbon-capture solution for industrial emissions that can also supply captured CO₂ to downstream green molecule production.



SYSTEM ROLE

Captured CO₂ can feed downstream methanol, methane and SAF production within Flex-to-X.



CUSTOMER VALUE

Connecting industrial carbon capture with carbon feedstock for green fuels and chemicals.

1 

High-Performance Solvent System

Low viscosity, strong degradation resistance, low regeneration energy and high CO₂ loading.

2 

Heat Integration

Integrated process design reduces capture-energy demand.

3 

Standardized Modules

Common module designs and interfaces support modular delivery and scaled deployment.