

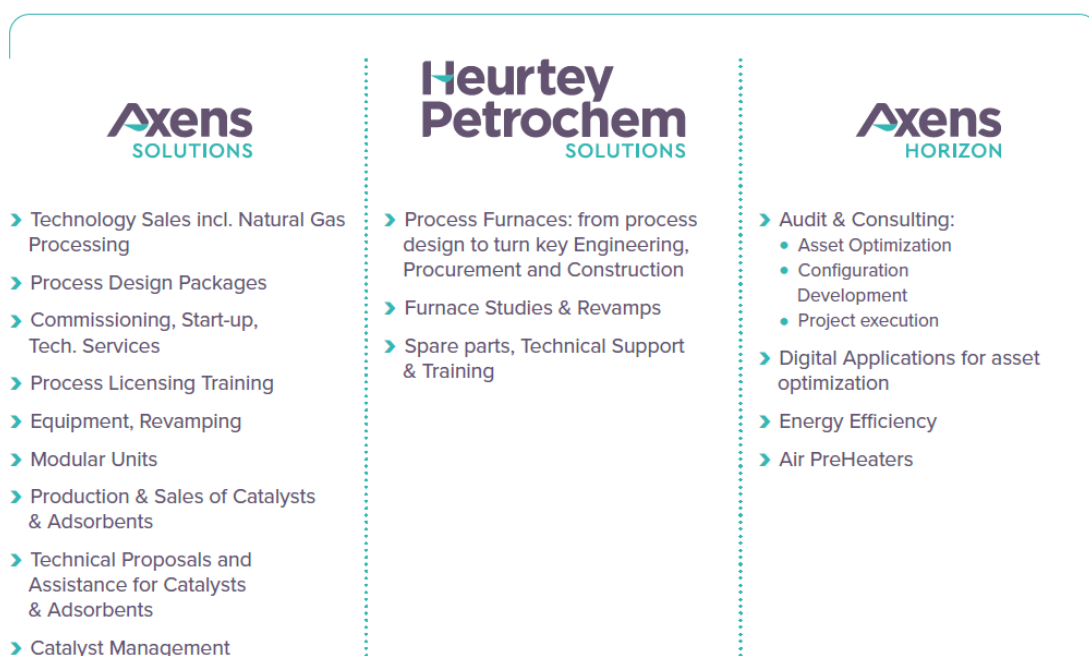
Company profile section:

[Axens](#) is a group providing a complete range of solutions for the conversion of oil and biomass to [cleaner fuels](#), the production and purification of major petrochemical intermediates as well as all of [natural gas' treatment](#) and conversion options. The offer includes technologies, equipment, furnaces, modular units, [catalysts](#), [adsorbents](#) and related services. Axens is ideally positioned to cover the entire value chain, from feasibility study to unit start-up and follow-up throughout the entire unit cycle life. This unique position ensures the highest level of performance with a reduced environmental footprint. Axens global offer is based on highly trained human resources, modern production facilities and an extended global network for industrial, technical supports & commercial services. Axens is an IFP Group company.

Axens, Powering a Complete Offer

[Axens Group](#) is currently active in 5 markets ([Oil Refining](#), [Petrochemicals](#), [Gases](#), [Alternatives & Renewables](#), [Water](#)) and is recognized as one of the world's foremost suppliers of technologies, products, [services](#) and equipment to the [Refining](#) and [Petrochemical](#) intermediates markets.

[Axens](#) is the global brand for all its activities represented by the following commercial brand names:



Axens overview section

Today, the energy and chemical industries must be responsive and proactive in adapting their assets and operations to contribute to a [sustainable future](#).

Our commitment is to deliver a complete offer of inventive, sustainable and economically efficient integrated solutions for cleaner mobility, chemical intermediates production, natural gas and effluent treatment, supporting our clients' environmental and energy transition challenges.

[Axens Group](#) delivers a broader range of solutions, covering the entire value chain and enabling to enhance the profitability and environmental performance of its clients.

Our global offer is based on highly trained human resources, modern production facilities and an extended global network for industrial, technical support and commercial services.

Working as one company, we are committed to promoting diversity and to fostering innovation and collaboration in order to create added value for our clients.

Sharing a common culture of trust, safety and customer orientation, we aim to be the preferred partner through multi-specialist integrated offers, inventing and delivering ever more advanced and efficient solutions for a better world.

Literature section:

Axens Symphony™ reforming catalysts -> Symphony® Reforming Catalysts

Symphony® is a harmonious orchestration of 100 years of cumulative reforming catalyst expertise scored to yield superior performance and client satisfaction. Axens' recent acquisition of Criterion's reforming business has allowed for unprecedented synergies between superior catalyst support technologies and superior multi-metal formulation technologies.

The results of these synergies are reflected in compelling improvement in yields and hydrothermal stability for virtually all reforming services from:

- Fixed bed to CCR
- Low to high density loading
- Lean to rich naphtha feed
- High to low octane severity

Symphony® should be the catalyst of choice with replacement profitability so conclusive that even a change-out before end-of-life assures payback in months rather than years.

Isomerisation - High octane C5/C6 cuts via isomerisation processes -> Isomerization

C5/C6 isomerization is a must-have for refiners who want to maximize the profitability of their gasoline pool. This process can be adapted to various configurations and allows improving C5/C6 naphtha cut octane numbers up to 92 without constraints on olefins and sulfur.

Axens is licensing a complete set of isomerization configurations in order to support refiners to resolve the evolving gasoline pool equation.

Arofining™ - Aromatics purification via selective hydrogenation -> Arofining™

Aromatics commercial specifications, as well as transformation and separation processes, require aromatic streams free of unsaturated compounds. Arofining™ is an aromatics purification technology aiming at hydrogenating in a selective manner olefins, diolefins and styrenics while preserving the highly valuable aromatics.

Advanced process control for Prime-G+™ -> Prime-G+™

Deep hydrodesulfurization (HDS) of FCC gasoline (the largest sulfur contributor in the gasoline pool) is required to reduce gasoline pool sulfur content.

Technologies must meet the following challenges:

- Good octane retention
- Excellent gasoline yield retention
- No RVP increase
- Minimum hydrogen consumption
- Operational reliability
- Ability to co-process other sulfur-rich streams.

The commercially proven Prime-G+™ technology is the market leader for selective hydrodesulfurization of cracked naphtha.

Prime-G+™ stems from Axens' extensive experience acquired in cracked naphtha

HDS and selective hydrogenation of LPG and gasoline (figure 1).

Axens catalysts and adsorbents -> Catalysts & Adsorbents Product listing

No intro

Axens performance programs -> Connect'In™

High speed data networks, cloud-based systems and advanced data techniques are leading a distinct change in the way industries monitor and optimize operating assets. Refineries that will adopt real-time unit monitoring tools incorporating on-demand, advanced modelling of process performance will see an immediate marketplace advantage.

Axens' Connect'In™ addresses these challenges and is leading the breakthrough to substantially improve the efficiency of refineries. Axens has developed Connect'In™, a digital application, that automatically collects data from the refinery, with the highest standards of cyber security, and converts them into normalized KPIs using Axens high-fidelity models in real-time. Results are displayed through dashboards and projection tools enabling to accelerate the decision-making process (see figure 1).

Axens has always been providing optimization services through technical assistance services, audits, troubleshooting and margin improvement studies, APC, Linear Programming, and management support.

Connect'In™ is the natural, digital evolution of these services aimed at increasing refineries profitability.