



Providing fast and cost
effective solutions

INDUSTRIAL CONSULTING

***MATURUS OPTIMI** provides best in class feasibility studies and technology evaluation services.*

- Feasibility Studies
- Competitor Analysis
- Licensing Technologies
- Technology and estimates reviews
- Energy Efficiency & Optimization
- Global Relocation Studies
- Risk Analysis
- Courses and Training

maturus optimi ✓
industrial consulting

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Company

Maturus Optimi focusses primarily on development and techno-economic assessment of existing and emerging technologies for the process manufacturing industry. Using state of the art engineering tools Maturus provides solutions that take your process development to a different level.

Business Solutions

Feasibility studies: integrated techno-economic studies for new or proven technologies; develop and plan your products based on clear and well-substantiated studies

Competitor analysis: be ahead of your competition; compare technologies and economics for processes and choose the most profitable.

Licensing technologies: fast and reliable estimates of the licensed processes in various scales and in different locations world wide.

Energy efficiency & optimization: improve the process efficiency and minimize the energy costs in your process or plant through the state of the art energy optimization methodologies and tools.

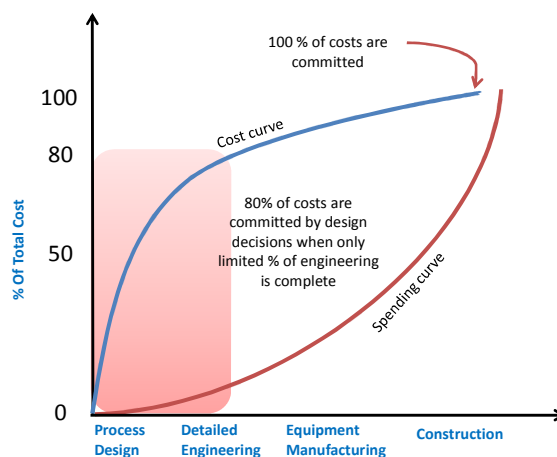
Process and Technology Evaluation studies: from laboratory via mini and demo plant concepts to commercial scale; from laboratory results and literature we synthesize a preliminary scalable process model in order to examine technology, economics but also include utility and energy demands to get a complete insight at a very early stage of project development.

Global relocation studies: estimate the cost of your project in multiple locations worldwide by using our in house developed re-location factor tool.

Risk analysis: assess potential risks, quantitatively and qualitatively, early in your project and create a technology / plant where risks are identified and/or mitigated.

Technology and estimate reviews: get a fast and accurate review of your estimate, challenge your contractor.

Due diligence: thinking of buying or co-owning a process or a part of a process? Maturus Optimi substantiates your due diligence analysis with facts concerning technology and economics.



Education & Experience

Highly skilled experts with highest educational degree in chemical engineering and addition of business administration. Our professional experience stretches back over 25 years covering operations, engineering and research in different international industries. Our experience includes power and utility sector, (petro) chemicals, food, pharmaceutical, oil & gas and renewables.

With over 15 years in depth experience with AspenTech engineering products, we are expert partner for AspenTech enhancing their senior consultancy services and providing specialized training programs for AspenOne software.

We are conversant in English, Spanish, German & Dutch.

Projects

A typical cross-cut of our project portfolio / experience:

- Feasibility study for Naphtha cracker expansion: new cracker, revamp existing including logistics (> 750 MM \$),
- Gas storage: review of project scope and estimate of a gas storage project in the Netherlands for investor (> 1.000 MM\$)
- Polypropylene plant (design from licensor) and High pressure Polyethylene (new unproven design) (> 300 MM \$)
- Elastomers plant techno-economic evaluation covering various technologies to produce elastomers (>300 MM \$)
- Caprolactam: techno economical assessment of classical vs. renewable routes, debottlenecking of existing plants, location studies, re-

view of conceptual and basic estimates (50 – 400 MM \$)

- Renewables: techno-economic feasibility studies for Biofuels and Chemical Basic Building Blocks, including classical technologies, 2nd and 3rd generation processes with both proven and unproven concepts (100 – 800 MM \$). The studies include: detailed process model development, comprehensive heat and process integration solution, techno-economic evaluation, technology comparison and evaluation.
- Pharmaceutical: technology and economics surveys for various promising future products (50 – 150 MM\$)
- Conceptual project studies based on plant capacity and technology provider information (> 200 MM \$)
- Competitor analysis for Melamine and fertilizer production facilities
- Utility optimization and planning of major European multi-plant site
- Simulation models: detailed robust model for existing polymer plant as a base for online model to optimize plant

Our Clients

Our main field of operations is with industrial and international oriented clients. Large and medium size companies from various industrial sectors, such as: Chemical, Petrochemical, Pharmaceutical, Oil & Gas, Energy & Renewables.

We also support educational and scientific institutes involved in research & development of process industry.

Network

Maturus Optimi takes pride in having a large and various network.

- Expert partner for Aspentech and with that also member of the Aspen steering committee and Aspen user group Europe and US
- Process manufacturing companies (e.g. DSM, Evonik, OCI Nitrogen, Dow Chemical, Unilever, Dupont, Akzo, Sasol, Sabic, Taqa, Lanxess)
- E&C companies (e.g. Fluor, Tebodin, Kvaerner, CB&I Lummus, Linde, Technip)
- Cooperation with independent engineering experts: Strategic Estimating Systems (SES, USA), Pareto Cost Consultancy
- Universities (Netherlands and Germany)
- Independent research organizations (eg. TNO Netherlands)
- Other experts in supporting disciplines (e.g. specialists, engineers, scientists, 'soft' skills)



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