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PROSPECTUS February 2011

Methanol

Strategic Business Analysis

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CHEMSYSTEMS – a brand owned by Nexant, Inc. that provides support to decision makers in the petroleum, chemical and petrochemical industries

Nexant

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SECTION 1.

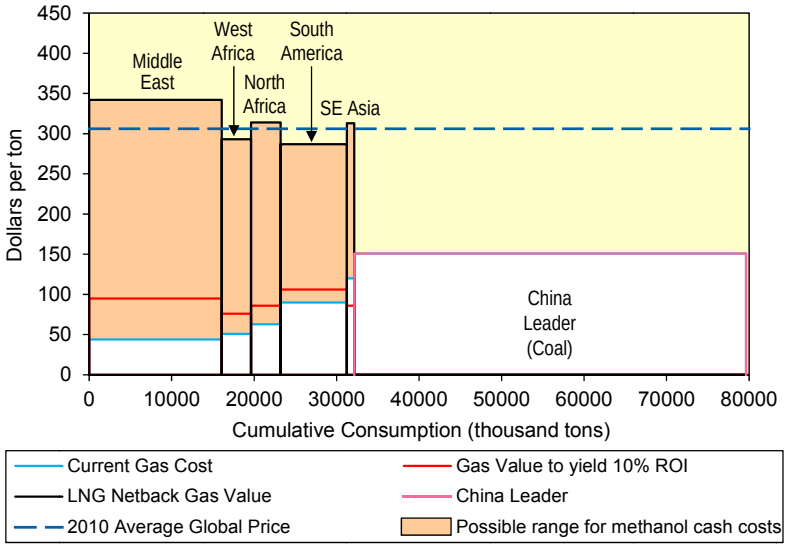
Business Need for the Program

The methanol landscape has altered dramatically in the last decade as significant restructuring and price volatility have rocked the industry. Despite this upheaval and uncertainty, growth has continued apace. By the end of 2009 global capacity had increased 90 percent over the 2000 total.

A key driver of this frenetic activity has been the cost of feedstock and demand for emerging end-uses. High gas costs in the traditional production centres of North America and Western Europe have put producers in these regions under severe pressure (although recent North American gas costs have fallen prompting the restart of some mothballed capacity). In response, major developments in methanol capacities are being made in the regions with access to low cost natural gas. On the other hand, environmental legislation and government strategy to reduce hydrocarbon dependence in China have boosted methanol demand for uses such as biodiesel, DME, gasoline blending and olefins.

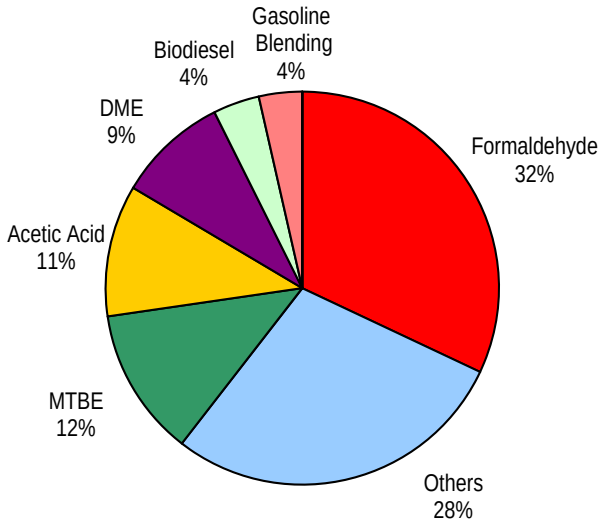
There is clear upward pressure on natural gas prices around the world even in locations where prices have historically been "fixed" as the high crude oil environment generates much higher returns to such gas-based projects. It therefore seems likely that no (or very few) new projects will enjoy the low gas prices currently enjoyed by existing projects. Consequently, when new projects are benchmarked against existing competitors, the customary "lower quartile" cost position expected by investors and lenders is unlikely to be achieved. The figure below depicts a cumulative cash cost curve of potential incremental supply between 2010-2025. It illustrates the cash cost of methanol production at three different gas values to illustrate the range of possible methanol cash costs of future facilities by region.

Potential Cash Costs for Projected New Methanol Supply, 2010-2025



Methanol is a key chemical intermediate and its major derivatives are formaldehyde, methyl tertiary butyl ether (MTBE) and fuels, and acetic acid.

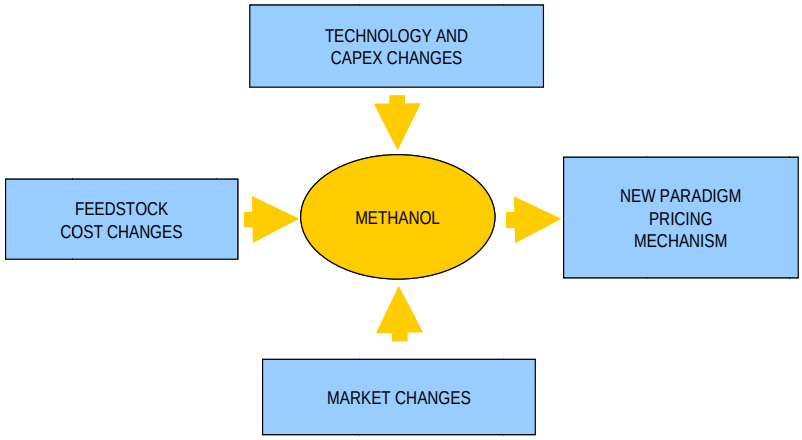
Methanol Demand by End Use
(2009)



The methanol market is in a state of change with some derivatives increasing strongly such as biodiesel, gasoline blending, DME, Methanol-to-Olefins and Methanol-to-Propylene. Demand potential into these new outlets is highly dependent on the cost competitiveness of methanol against traditional alternatives such as LPG. This in turn is determined by future developments in feedstock prices and the structure of the methanol production base.

These are dynamic and exciting times for the methanol industry that bring with them a wealth of opportunities for existing and prospective players in the methanol market. To succeed in capitalizing on these opportunities, it is crucial to understand the drivers and mechanisms that are shaping the changes in this industry. In particular, the new pricing mechanism linked to gasoline and the very strong growth in emerging uses.

Methanol Business Drivers



Nexant's wealth of experience in the methanol sector, combined with our wider global presence in the global gas, refined products, biofuel and petrochemical industries, provides us with a unique overview of all factors influencing the development of the methanol business worldwide. The Methanol Strategic Business Analysis (SBA) Program distills the core issues and insights from our accumulated expertise to provide subscribers with a good understanding of not only the fundamental drivers but also the likely future strategic direction of the methanol industry. We believe this will be an invaluable source of insight and strategic business analysis for executives and managers at all levels of the business.

Nexant's Unique Blend of Capabilities

STRATEGY CONSULTING	GLOBAL GAS PRACTICE
▪ Distilling key trends to understand businesses ▪ Portfolio appraisal and positioning ▪ Merger & acquisition support ▪ Customer segmentation ▪ Manufacturing Strategy ▪ Value chain positioning ▪ Growth Strategy ▪ Industry structure analyses	▪ Global gas availability and pricing ▪ Strong experience of alternative gas monetization options including LNG, GTL, ammonia and power ▪ National and regional energy planning ▪ Gas development projects ▪ Gas asset management ▪ Gas value chain analyses
CHEMICALS PRACTICE	**DOWNSTREAM OIL AND BIOFUELS PRACTICE**
▪ Strong understanding of methanol and derivative markets, technology and economics ▪ Strong olefins experience and active MTO/MTP evaluation engagements ▪ Market dynamics research and analysis and forecasts ▪ Pricing and profitability scenarios ▪ Performance benchmarking ▪ Cost curve assessments ▪ Techno-economic feasibility studies	▪ Petroleum value chain analysis including ports & terminals, refining, storage & distribution, terminals & depots, fuel wholesaling and retailing ▪ Biofuel market and technology development ▪ Good understanding of fuel markets and the potential for methanol use as a gasoline blendstock, bio-diesel feedstock and DME feedstock

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SECTION 2.

Value of the Program

The Program provides a valuable aid for strategic planning purposes at a time of both opportunity and challenge for players and prospective entrants into the methanol business. It combines a review of the fundamental business drivers and their dynamics, as well as analysis of the wider trends in methanol and what these entail for the short, medium and long-term outlook for the business. Key issues which are addressed include:

Business Fundamentals:

- **Supply:** What methanol projects are currently under development and in planning? What are the primary motivators behind these developments?
- **Demand:** What is the expected demand outlook segmented by geography and application? Which segments are driving growth?
- **Profitability:** How have the changes in capacity distribution and feedstock price impacted profitability of existing producers?
- **Pricing:** What are the implications of the scale and location of new projects on future product pricing?
- **Technology:** Who are the major process licensors and what are the latest developments?
- **Competitiveness:** How do the various producers compare in terms of delivered cost competitiveness to the major international markets?

Strategic trends and challenges:

Coverage of strategic trends is strongly influenced by current activity and pertinent trends in the methanol business. Examples of issues which are addressed include:

- **Feedstocks:** How and why do feedstock prices vary globally? How can higher hydrocarbon feedstocks be levereged? How sustainable is the stranded gas advantage in the longer term?
- **Logistics:** What are the future requirements for methanol shipping? Will freight costs continue to soar?
- **Capacity development:** What are the implications for the industry of the trend toward very large methanol capacities? How sustainable is the current rate of capacity addition? Where will future capacity be built?
- **Emerging methanol markets:** what are alternative outlooks for methanol penetration into the fuel, polyolefins or power sectors?
- **Methanol to Olefins Competitiveness:** What is the competitive postion of MTO and MTP technologies versus other conventional olefins technology? How do capital costs influence project return?
- **Product prices:** What will replace the old price-setting mechanism? What determines the new boundaries?

The Program has analysed and commented on these developments and is an essential source of analysis for those companies active in the industry. Our Program is backed up by access to experienced Nexant consultants who are able to discuss and comment on the latest developments and their implications. We believe our offering is unique in terms of breadth and depth of insight and coverage.

SECTION 3.

Scope of the Program

Your annual subscription to the **Methanol Strategic Business Analysis Program** includes:

- Two hard copies of the full annual 339 page report and unlimited downloads of soft copies from the ChemSystems web site
- Access to the data and analysis through the ChemSystems website at www.chemsystems.com and via electronic reports (Adobe .pdf file)
- Quarterly updates on capacity, project status and pricing developments
- Copies of methanol conference papers presented by our consultants
- Access to desk-based support from our consulting staff

Strategic Trends and Challenges

This analysis is predominantly qualitative, building upon the trends identified in the market and economic analysis. Hypotheses are developed and investigated in order to provide answers to the questions facing the industry. Nexant's unique access to the wider value chain including developments in the upstream oil & gas industry and downstream energy, fuels (including biofuels) and chemicals markets is leveraged in this analysis. Combined with our extensive experience as advisors to leading methanol producers, this knowledge has allowed us to provide subscribers with in-depth, original insight at the leading edge of methanol strategic business analysis.

Market Dynamics

The Program delivers an analysis of the supply, demand and net trade outlook for methanol on a global basis covering historic and projected trends for the period 1996 to 2025. A capacity listing of existing producers and firm projects has also been provided. The geographic coverage of the market analysis includes:

- North America
- South America, including Trinidad
- Western Europe
- Central and Eastern Europe
- Asia Pacific, icluding individual profiles of key countries:
  - Japan
  - China
- Middle East
- Africa

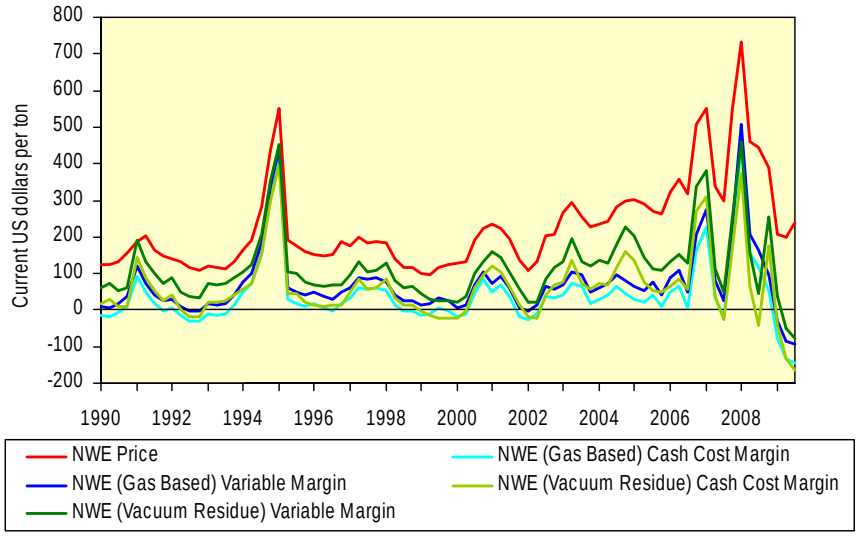
As well as quantitative projections of capacity, consumption, operating rates, and net trade volumes, in-depth analysis of the major factors influencing consumption and capacity growth have been included. An explanation of the expected developments in demand by end use sector, including new uses such as in the alternative fuels markets, is also presented. Segmentation by end-use covers:

- Formaldehyde
- Acetic Acid
- MTBE
- Others
- DME
- Gasoline Blending
- Olefins
- Biodiesel

Industry Profitability and Pricing

- Historic profitability of archetypal producers in the traditional producing centres of the United States and Western Europe, as well as in the Middle East for the period 1996 to present.
- Profitability projections with estimates of margins for the United States, Western Europe and the Middle East.

West European Methanol Margin Analysis



Profitability is the key consideration for future project developers, and the Program provides:

- Historic and projected future prices for the period 1983 to 2025
- Prices for the three main reference regions of the U.S., Western Europe and Asia
- Nexant's Oil Scenario methodology has been used to assess the impact of volatility in energy costs on product prices
- Commentary is provided on the key drivers and price setting mechanisms, and the outlook for these going forward

Technology

- An overview of methanol production technology is provided using both gas and coal as feedstocks.
- The major licensors are profiled and their market share analysed
- The technologies of seven major licensors are reviewed in detail
- New technology developments are reviewed
- Methanol production costs are analysed with a breakdown of the key components of the variable, fixed and capital costs

Delivered Cost Competitiveness

- The current delivered cost to market is assessed and competitiveness presented
- In order to accurately evaluate the transportation costs associated with delivering methanol to the major markets, Nexant has developed shipping models that capture factors such as the cargo size and capital cost of typical methanol carriers, variable and fixed operating costs associated with shipping, terminalling fees, canal dues, etc.
- For each major market, the delivered cost for domestic methanol producers is compared to the delivered costs of major competing producers selling into that markets, as shown below:

Major Producers	Target Markets
United States of America	United States of America
Trinidad	Western Europe
South America	South-East Asia (Singapore)
Western Europe	Japan
Russia	
Middle East	
Africa	
Asia Pacific	
China (coal)	

Appendix C shows the Table of Contents of the main report.

SECTION 4.

Methodology

This Program is produced by a global organisation of Nexant researchers, analysts and recognised experts in the methanol industry. All our analysis is underpinned by Nexant's considerable experience of work in the methanol sector, as well as the unique ChemSystems simulator.

Consulting Support

Nexant's consultants are available to subscribers to provide further discussion and clarification of any areas of the industry covered by the subscription. Any travel or out-of-pocket expenses associated with such consulting support is not covered by the subscription and will be invoiced separately, at cost.

Strategic Analysis

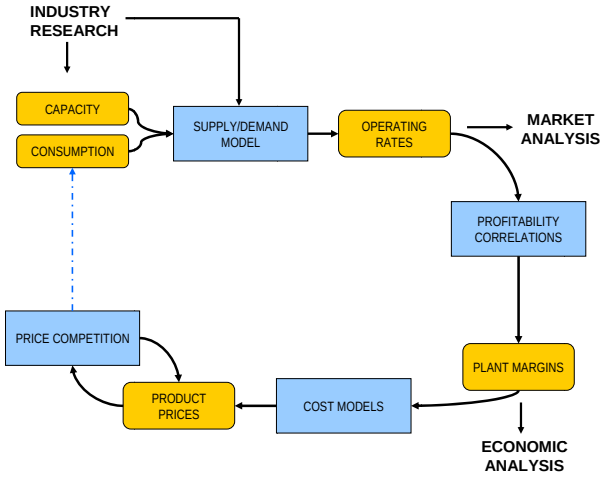
In addition to the technical and data-driven analysis that underlines the review of the business fundamentals, Nexant also brings the benefit of its extensive experience of single-client engagements to the Strategic Trends and Challenges discussion. We have acted in a wide variety of capacities spanning the areas of technical due diligence, feasibility analysis, market entry, competitiveness assessments and strategic planning for many prominent players in the methanol industry. Combined with our wealth of wider experience in the upstream gas and downstream methanol derivatives markets, we are able to deliver insights into emerging trends both within the methanol business and across the wider value chain. Selected engagments are presented in Appendix D.

ChemSystems Simulator

ChemSystems simulator is the proprietary simulation model developed by Nexant and used to generate all the analysis and forecasts of the ChemSystems Online® and other offerings including the **Methanol Strategic Business Analysis Program**. The simulation model is an experience-based database running commodity petrochemical business logic algorithms to produce multi-scenario simulations of the global industry.

The ChemSystems simulator is available to subscribing companies, for an additional subscription fee, to develop private forecasts of market dynamics, industry profitability, etc. Clients are currently using the simulator for corporate and business unit planning, investment decision making and competitive analysis.

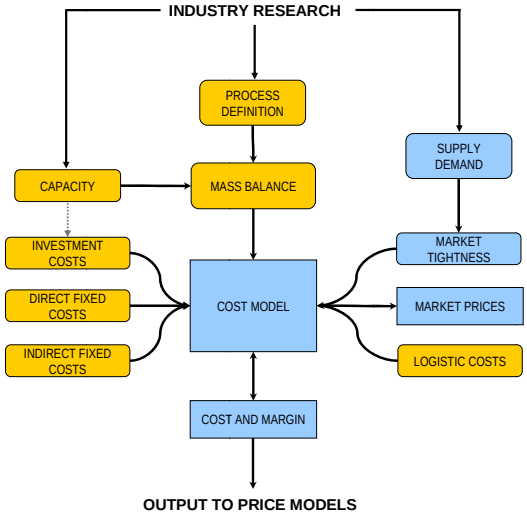
ChemSystems Simulator Simplified Logic Diagram



It is integrated from end-use markets back to petrochemical feedstocks. It considers inter-material competition, inter-regional price relationships, chain margins, product substitution, logistic costs and trade drivers. Costs and prices are integrated from crude oil, natural gas and petrochemical feedstocks through methanol to downstream chemicals and refined products. One of the functional blocks depicted in the graphic above is expanded below to illustrate the interconnectivity of these drivers and the complex relationships that are built into Simulator algorithms.

ChemSystems Simulator Functional Blocks

(simplified cost model logic diagram)



The ChemSystems simulator delivers step change improvements in market forecasting and business/corporate planning, while reducing the resources and time required to evaluate multiple hypotheses and scenarios.

SECTION 5.

Costs and Subscription

The subscription price for an annual company subscription to the **Methanol Strategic Business Analysis Program** is £12 500 (twelve thousand five hundred pounds sterling). The annual subscription covers one year from the date of subscription. The standard subscription includes:

- Two hard copies of the Report and unlimited downloads of soft copies from the ChemSystems web site.
- Access to the data and analysis through the ChemSystems website at www.chemsystems.com and via electronic reports (Adobe .pdf file)
- Quarterly updates on capacity, project status, and pricing developments
- Copies of methanol conference papers presented by our consultants
- Access to desk-based support from our consulting staff

Nexant is pleased to offer a **10 percent discount** to Methanol SBA subscribers who also subscribe to its Ammonia and Urea SBA program.

APPENDIX A.

Subscription Terms and Conditions

1. Nexant will provide employees of Subscriber direct online access to electronic copies of the Subscribed Reports and database via a Subscriber account through the www.chemsystems.com web site for the duration of this Agreement. Nexant will provide users of the service with a user name and password. Subscriber will inform Nexant if any of its employees who are registered users leave Subscriber's employment.
2. Nexant will provide to Subscriber bound paper copies of each Subscribed Report on publication.
3. While the Subscribed Reports will represent an original effort by Nexant based on its own research, it is understood that portions of the Subscribed Reports will involve the collection of information from third parties, both published and unpublished. Nexant does not believe that the Subscribed Reports will contain any confidential technical information of third parties. Nexant does not warrant the accuracy or completeness of information.
4. The information disclosed in the Subscribed Reports and the terms of this Agreement will be retained by Subscriber for the sole and confidential use of Subscriber and its 51 percent or greater owned affiliates except those parents or affiliates which are engaged in the business of marketing research, management consulting, or publishing or are subsidiaries of such firms (Permitted Subscribers). However, the Permitted Subscribers may use said information in their own research and commercial activities, including loaning the data on a confidential basis to third parties for temporary and specific use for the sole benefit of Subscriber. It is the responsibility of Subscriber to notify Nexant of 51 percent or greater owned affiliates requiring access to the Subscribed Reports. Breach of this covenant of use shall entitle Nexant to terminate this Agreement immediately with no obligation to return any portion of the Subscription Fee.
5. Subscriber further agrees that it will use reasonable efforts to keep the Subscribed Reports for its sole use; however, this restriction shall not apply to information which is or becomes generally available to the public in a printed publication, which is already in the possession of Subscriber, or which is received by Subscriber in good faith from a third party without an obligation of confidentiality.
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10. Nexant does not accept responsibility for the accuracy of the information in the Subscribed Reports. Subscriber is responsible for use of the information contained in the Subscribed Reports and Nexant will not be responsible for any reliance Subscriber places on the contents thereof.
11. A person who is not a party to this Agreement shall have no right to enforce any of its terms.
12. By signing the Authorization Nexant and Subscriber agree that the Scope of the Program, Authorization and Subscription Terms and Conditions represents the complete agreement between them regarding the Subscribed Reports. No change, modification, extension, termination or waiver of this Agreement, or any of the provision herein, shall be valid unless made in writing and signed by duly authorised representatives of the parties.
13. This Agreement and the relationship between the parties shall be governed by and interpreted in accordance with the laws of the state of New York, United States of America.
14. Subscriber shall be invoiced the full Subscription Fee upon signature of this Agreement. Amounts are due upon receipt of invoice and payable within thirty (30) days. If payment is not made within 30 days from the date of invoice, Subscriber will be subject to late payment charges. Such charges will be calculated at a monthly rate of 1.5 percent of the invoice amount, compounded for each period or part period of 30 days that the invoice remains unpaid.

If the foregoing terms are acceptable, please sign below to confirm subscriber's agreement and return to Nexant.

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SUBSCRIBER:	.....	**NEXANT, INC.**	
Name:	.....	Name:	.....
Title:	.....	Title:	.....
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Fax:	.....	Fax:	.....
Email:	.....	Email:	.....
Date:	.....	Date:	.....
Signature:	.....	Signature:	.....

Methanol Strategic Business Analysis Program .. GBP 12,500

We shall pay Nexant, Inc. the applicable fee stated above plus applicable taxes (including but not limited to VAT, withholding tax and any other applicable deductions).

If your company requires a purchase order number, please provide the number below:

Purchase Order Number: _____

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APPENDIX C.

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APPENDIX D.

Credentials

Nexant *ChemSystems*

Nexant

Nexant, a leading, global provider of consulting services to the energy industry, was established on 1 January 2000. As an independent company with a number of shareholders, Nexant provides impartial advice to clients in the energy and chemicals sector.

Nexant's global headquarters are in San Francisco. The company provides a range of services to the energy industries, as detailed in our literature and on the website at www.nexant.com.

Nexant Oil & Gas and Chemicals Practices

The foundations of Nexant's Oil & Gas Practice are based on more than 25 years of experience in the oil and gas industries as part of Bechtel's consulting business and 40 years of experience of the downstream oil practice originating from Nexant's acquisition of Chem Systems in 2001. Our consolidated expertise and experience is unrivalled by any other specialist consulting firm in the industry.

Our Oil & Gas and Chemicals Practices serve the entire industry value chain, from oil and gas production through the downstream sub-sector to chemicals, including speciality chemicals. These services complement Nexant's other divisions, which provide a comprehensive range of consulting services and software to the electric power and advanced energy sectors.

Nexant's Chemicals Practice offers its clients ***Insight and Understanding*** – Our sharp focus on the petroleum and chemical industry gives us an unrivalled ***insight*** into the current issues and opportunities; the shifting landscape and changing fortunes that affect the sector. We ***understand*** our clients' businesses - the challenges they face and the competitive pressures which shape their thinking.

This can only be achieved through an unrivalled combination of:

- **Industry knowledge** - we consult on the petroleum and chemical industry; our consultants are all experts in the industry, who work fulltime on the challenges facing the industry.
- **In-house data** - we have an unrivalled database on the industry and its markets, and employ teams of researchers to continually update this resource. Our ChemSystems Online® product, which can be accessed by subscribers, contains the core of this knowledge base covering the commodity chemicals and polymers.
- **Proven and tested methodologies** - we have developed a range of methodologies to cover different types of assignments, such as feasibility studies, project finance support, privatisations, due diligence studies for acquisitions and financings, market and technology review, and selection studies. All of these have been tailored and continuously improved to suit the needs of the industry.

- **Technical competence** - we constantly track the technical improvements in the industry and frequently review new process improvements for clients. Our *ChemSystems* Process Evaluation/Research Planning (PERP) Program encapsulates some of this work.
- **Global** - our permanent offices in London, New York (White Plains), Houston, Tokyo, and Bangkok provide comprehensive coverage. In addition, we have long-term relationships with representatives or registered branch offices in most major locations, including Beijing, Singapore, Seoul, Moscow, Abu Dhabi, Amman, Cairo, Abuja, Rio de Janeiro, Caracas, and Paris. Nexant professionals have extensive experience in emerging markets such as the former Soviet Union and China, and our team of industry experts can work fluently in over ten languages.
- **Strategic consulting** - we have been on the leading edge of many of the strategic initiatives in the industry, including consolidations, restructuring, and privatisations. We pride ourselves on our thought leadership in strategy consulting in the sector.
- **Breadth** across all relevant sectors. Our team can provide clients with a complete and holistic view of the sector and its place in the overall economy covering the entire value chain.

Nexant has unrivalled experience:

- Each year Nexant advises on tens of billions of dollars of petroleum and chemicals projects, in most of the major global supply and demand centres, covering the full hydrocarbon production, processing and transportation supply chain.
- Our team routinely works for almost every major multinational corporation in the petroleum and chemical business and for many national companies, governments, and international organisations. Nexant's view is often quoted by major corporations as an authoritative view on the industry.

We are recognised for our quality and industry thought leadership:

- Nexant is often quoted in the petroleum and chemical press on its views on markets and developments.
- Our team members are called on to give expert papers at major conferences.
- Our experienced Vice Presidents are responsible for the quality of our work in their individual areas of expertise. They are expected to provide inputs to and supervise every assignment we undertake.

We have extensive resources to fulfil any assignment in the industry:

- Nexant Oil & Gas and Chemicals Practices employ over one hundred staff, making us the largest specialist consultant in the sector. We are the only industry specialist consultant to offer a fully comprehensive in-house service from well-to-wire and to downstream chemical.
- All staff are experienced in the industry and have typically worked previously for a multi-national industry company or a major contractor/technology company. More than half of our staff have worked for Nexant and the predecessor organisations for more than ten years.
- Staff qualifications include chemists and engineers as well as economists and legal specialists. A very high proportion of staff has advanced degrees - PhD or MBA.
- We can staff projects anywhere in the world from our global network of offices.
- Our data resources are the best in the industry and are continually updated.

ChemSystems Online

ChemSystems Online® is an internet-based planning and forecasting tool. It heralds a new generation of consulting and planning solutions to give a competitive edge to your investment decisions and business strategies. ChemSystems Online® provides online access to the database behind the reports of the *ChemSystems* Petroleum and Petrochemical Economics (PPE) program.

It provides online access to the most comprehensive database of current data, analysis and forecasts of the global petrochemical industry, including:

- Techno-Economics:
  - Techno-Economic cost of production, raw material consumption, yield
- Industry Profitability & Prices:
  - Analysis and forecasts of costs, prices, margins and profitability
- Market Dynamics:
  - Location, process and technology, ownership, scale, expansions, market capacity shares
  - Consumption and consumption drivers, production and supply, trade, global supply and demand projections up to 2025

Selected Methanol Single-Client Experience

The methanol industry is an area of particular specialisation by Nexant, having performed well over a hundred engagements for most of the significant global and regional players and numerous new or would-be new operators, as well as financial or governmental organisations. The following notes describe a few major projects undertaken in recent years. Details of the many other engagements are available on request. In many cases, the nature of Nexant work is confidential, and we are not free to identify the client with the project. For this reason, some of the typical projects listed below do not identify the client.

Market Feasibility Study, Russia: Nexant reviewed methanol, ammonia and urea markets, pricing, delivered cost competitiveness, market entry strategy and technology options for a potential new entrant.

Methanol Feasibility Study: Nexant has recently completed a feasibility study for a 5 000 ton per day methanol unit in the PARS economic zone, Assaluyeh, Iran, for a foreign investor. This included market dynamics, price forecasts, cost competitiveness, marketing strategy, project execution and implementation definition and economic evaluation.

MTO Commercial and Technical Risk Assessment

Nexant was retained by the sponsor and its financial advisor to review market dynamics and pricing outlooks, perform risk assessments for the air separation unit (ASU), methanol, methanol to olefins (MTO) with olefin cracking process (OCP) and polyolefin process technologies, critical equipment risk assessment for the methanol, MTO-OCP and ASU plants and also a high-level social environmental awareness overview.

DME Market Assessments

Nexant prepared a market study to evaluate the potential future of DME in selected markets. The analyses focussed on generic potential production locations in the Middle East ad Nigeria, along with demand potential in selected Asian counties.

Methanol Markets and Pricing

Nexant was retained by Europe's leading methanol producer to analyse historic market and pricing trends and develop future projections, with a special focus on the European market.

Strategy Plan Development

Nexant developed a 10-year strategic plan for margin enhancement for a major Russian chemicals and fertilizer company whose portfolio includes four methanol plants, incorporating conventional natural gas reforming and also acetylene off-gas technologies. The strategy was based on technology and manufacturing assessments of the sites, market characterisation and a profitability assessment of each business versus the wider global industry. Businesses and projects were identified within the substantial portfolio for expansion/investment and others for exit.

"New Paradigm" Methanol Pricing Outlook

Changing market dynamics in the methanol industry have caused many plants to close in North America. Once the final U.S. gas-based plant closes, the historically strong influence of U.S. gas costs on global methanol prices will cease and a "new paradigm" price-setting mechanism will emerge. Nexant projected future methanol prices under this new paradigm with some sensitivity cases also considered.

Lenders' Independent Engineer

Nexant is the lenders' independent engineer for the Salalah Methanol project in Oman. Activities performed include reviewing the project's: methanol process technology, execution and management, agreements, cost and schedule, environmental, health and safety, completion testing regime for lenders, financial model and operating parameters.

Global Methanol Business Outlook

Nexant performed this study considering the likely change in U.S. demand for MTBE and potential growth of fuel cell usage. The study included global and regional supply/demand outlook, price forecasts and an analysis of the competitiveness of the Middle Eastern client's proposed plant against international competition.

Methanol/MTBE Market Due Diligence

Acting on behalf of the banks arranging the loan facility for a Middle Eastern methanol/MTBE project, Nexant completed global and regional supply/demand analyses and forecasts, price forecasts, an analysis of the project's potential competitiveness in its key markets and a review of feedstock and off-take agreements.

Lenders' Independent Technical Consultant

Nexant is the independent technical consultant for the EMethanex methanol project at Damietta in Egypt, a joint venture between Methanex and EChem. Activities performed include reviews of facility design, site assessment, permits and licenses, project execution and plan, capital cost estimate, operating and maintenance costs, project performance, contracting process and contracts, economic analysis, project risk analysis as well as ad hoc technical advisory services and certifications.

Lenders' Independent Market Consultant

Nexant was retained as the independent market consultant by Samba for this Saudi Formaldehdye methanol project. Historic and projected methanol market dynamics, price and profitability, delivered cost competitiveness and marketing strategy were reviewed for the project. Market dynamics and pricing were also reviewed and projected for the company's existing businesses of formaldehyde, hexamine, paraformaldehyde and concrete additives.

Feasibility Study Assessment and Ranking

An Asian national oil and gas company was seeking new domestic investment opportunities to add value to its natural gas resources. It had received a number of project proposals from global companies in the form of detailed feasibility studies for methanol and/or ammonia production. The company retained Nexant to carry out an independent due diligence of these studies and to recommend investment priorities. Nexant undertook market opportunity studies, price forecasts, financial modelling, and other project assessments, and rated and ranked the projects.

Russian and East European Cost Competitiveness

Nexant profiled producers in this region, including any horizontal and vertical site integration, and analysed methanol delivered costs, including the outlook for the key cost factors of natural gas and freight costs.

Techno-Economic Feasibility Study

Nexant evaluated current and prospective large-scale technologies, capital and operating costs for a Qatari client considering investing in a large-scale methanol project. A financial evaluation of the project was performed and various sensitivity cases considered. Project development and implementation strategy was also reviewed.

Technical and Market Advice for New Methanol Project

Nexant provided technical and market consultancy services to Société Générale making assessments and recommendations from the standpoint of potential lenders to a proposed methanol plant in Western Australia including technology selection, project development, review of gas supply, EPC, O&M and offtake contracts and a market study reviewing of the supply/demand and pricing prospects for methanol, the delivered cost competitiveness of the plant and the marketing strategy for the product.

Methane to Polyolefins Feasibility Study

Nexant was retained to develop an independent feasibility study for this project, including detailed market and price analyses and forecasts; market strategy and off-take agreement development; gas feedstock analysis and agreement formulation; technology analysis and selection (for methanol, olefins via MTO or MTP, and polyolefins); configuration and product optimization; capital and operating cost estimation and forecasts; detailed economic and cash flow evaluation; and investment recommendations.

Production of Methanol from Oil Residue in Germany

In this study for a major global methanol producer, Nexant determined the alternative value of heavy fuel oil to German refineries and the cash cost of production of methanol was calculated for each of the three German methanol producers using this feedstock, taking due account of the integration with the refinery and with associated hydrogen and ammonia plants.

Methanol Benchmarking Study

Nexant performed a technical review of the operating performance of a group of methanol producers, identifying the most significant factors responsible for below average plant availability and output.

The Prospects for Diesel/Methanol Emulsions

Nexant assessed of the potential for methanol use, as an emulsion in diesel, considering the global use of diesel, the possible impact on refiners, etc.

Crude Methanol Markets

Nexant analysed the technical feasibility of selling crude methanol into chemical grade methanol markets for a potential methanol producer.

Natural Gas Utilisation

Nexant studied natural gas utilisation in Argentina, including:

- gasoline octane enhancement - preliminary licensor information
- MTBE production and use pre-feasibility study
- economics, pricing and project financing
- study of the optimum use of natural gas in transport.

Methanol Competitiveness and Business Valuation Study

Nexant benchmarked the production economics of a major methanol producer with its major competitors and then a valuation of the business based on a forecast of its methanol margin.

Methanol Project - Trinidad

Retained by Citicorp, Nexant provided project finance-related consulting services for a methanol plant at Point Lisas, Trinidad with input focused on the following:

- review of lump-sum turn-key (LSTK) contractor services,
- participation in contract negotiations to complete the contractor LSTK agreements and the product offtake agreements.

Floating Methanol Plant

Nexant evaluated the feasibility of a floating methanol plant in south-eastern Asia for a project sponsor.

Nexant's *ChemSystems* Methanol Multiclient Reports

Adding Value to Methane: Strategic Opportunities for the Middle East

This major study reviews (by each Middle Eastern State) methane availability and pricing issues, methane derivative market dynamics and impact on global trade, technology options, impact of these developments on competitiveness, extending the methane value chain and other strategic issues. The methanol chain products included are methanol, formaldehyde, acetic acid, DME, MTO and MTP. Also included are ammonia and its derivatives, GTL, LNG, pipelines and power.

Process Evaluation/Research Planning (PERP) Program

The PERP Program provides valuable insights and information for research planning and marketing personnel. It examines existing, developing and embryonic technologies, aiming to provide early identification of commercially significant technical developments. Eight or more reports per year are on petrochemicals; additional reports cover polymers, fine and performance chemicals, and other topics.

Recent PERP topics relating specifically to methanol and its derivatives have included:

- Methanol
- Developments in Methanol Production Technology
- Methanol to Olefins
- Developments in Syngas Production
- Formaldehyde
- MTBE
- TAME
- Alternative Uses of MTBE Facilities
- Impact of MTBE Phase-out on Chemical Markets
- Cost/Performance of Fuel Oxygenates
- Acetic Acid/Acetic Anhydride
- Acetic Acid Directly from Ethylene
- Acetic Acid via Ethane Oxidation
- Vinyl Acetate
- Fluidized Bed Vinyl Acetate Process
- Polyvinyl Alcohol
- Ethyl and Butyl Acetate
- Methyl Methacrylate
- Dimethyl Ether (DME)

CHEMSYSTEMS

ChemSystems Programs	
ChemSystems Online Providing online databases and tools for analysis and forecasts of the markets and economics of the petroleum and petrochemical industry.	**Petroleum & Petrochemical Economics (PPE)** Providing regular analysis and forecast reports on the profitability, competitive position, and supply/demand trends of the global industry.
ChemSystems Simulator Providing a state-of-the-art simulation model for the entire global petroleum and petrochemical market – including technology, costs, supply/demand, and profitability.	**Process Evaluation/ Research Planning (PERP)** Providing analysis and economic models of the existing and developing process technology used by the industry.
ChemSystems Training Providing in-house and public training courses on the industry, its chemistry and on the planning and analysis methodologies.	**PolyOlefins Planning Service (POPS)** Providing detailed market and technology evaluation of the global polyolefin industry.
Special Reports Providing reports on topical issues and aspects of the industry.	**Strategic Business Analysis (SBA)** Providing regular reports on the strategic trends that will shape the industry, including reviews of markets, pricing, technology and delivered cost competitiveness

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