Press release



IMMEDIATE RELEASE

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New technology has potential to transform pharma manufacture

Pfizer outlines Systems-based Pharmaceutics vision to enhance drug performance at the Advanced Process Modelling Forum in London

LONDON, 16 May 2012 --- Leading pharmaceuticals company Pfizer outlined its vision for Systems-based PharmaceuticsTM, a revolutionary model-based approach linking drug process and product engineering to product quality and performance in the human body, at the recent Advanced Process Modelling Forum in London.

Keynote speaker Ravi Shanker, Senior Research Fellow at Pfizer, said it is essential that pharmaceutical companies develop better methodologies to ensure the quality and efficacy of their products. This can only be achieved reliably and efficiently by developing a quantitative understanding of how decisions relating to the way the drug is manufactured affect the drug's behaviour within the body. He added, "Adopting a system-wide modelling approach is essential in this context".

The forum, aimed at senior business and technology decision makers in pharmaceuticals, oil & gas, power generation, chemicals, petrochemicals, food, minerals & mining and other process industry sectors, focused real-world opportunities to create sustainable value through the application of high-accuracy predictive process modelling. It was organised by Process Systems Enterprise (PSE), the leading supplier of Advanced Process Modelling[™] technology and services.

Other presenters in the dedicated Life Sciences session included Eli Lilly, GSK, the ERC-SOPS consortium and Process Systems Enterprise. Focus was the application of model-based techniques to enhance manufacturing process design and scale-up, optimise operations, accelerate process innovation and manage new technology risk, with a focus on laboratory-to-industrial-process workflows for reducing time-to-market for new developments.

Pharma companies are adopting advanced process modelling technology to rapidly accelerate value creation as part of Quality-by-Design (QbD) approaches, in particular by facilitating the move from batch to continuous processing and optimising solids process design and operation.

At the forum PSE made two important announcements: the release of gSOLIDS® 2.0, a second-generation solids process modelling software; the release of v2.0 of its gCRYSTAL® software for design, scale-up and optimisation of crystallisation processes. The company also provided a preview of v4.0 of its gPROMS® advanced process modelling platform.

Organiser Mark Matzopoulos, PSE's COO, says "advanced process modelling is about using predictive models to explore the design space rapidly, reduce uncertainty and make better, faster and safer decisions. The range and diversity of presentations at the forum illustrates the power that the technology has to transform the way the process industries design and operate."

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The Advanced Process Modelling Forum is an annual event held in London aimed at senior business and technology decision makers in pharmaceuticals, oil & gas, power generation, chemicals, petrochemicals, food, minerals & mining and other process industry sectors.

It focuses on creating sustainable value through the application of high-accuracy predictive modelling. Used to reduce uncertainty, make better, faster and safer design on process design and operation.

Presentations focus on the application of model-based techniques to enhance manufacturing process design and scale-up, optimise operations, accelerate process innovation and manage new technology risk, with a focus on laboratory-to-industrial-process workflows for reducing time-to-market for new developments.

The Advanced Process Modelling Forum is organised by Process Systems Enterprise (PSE), a leading supplier of Advanced Process Modelling technology and services.

About Process Systems Enterprise Ltd

PSE (<u>www.psenterprise.com</u>) is the world's foremost provider of Advanced Process Modelling software and services to the process industries. Advanced Process Modelling is transforming the way that process companies design and operate processes by enabling better, faster and safer design and operating decisions and reducing uncertainty.

Use of PSE's technology and services results in faster innovation, improved designs of processes and products, enhancement of existing operations and more effective R&D and experimental campaigns. It also facilitates capture and transfer of corporate knowledge across the organisation. Results are achieved with relatively low investment compared to alternative approaches – where these exist – with rapid return on investment.

PSE's global customer base of Fortune 500 process industry companies is served by operations in the UK, USA, Germany, Japan and Korea, and agencies in Saudi Arabia, China, Thailand, Malaysia and Abu Dhabi. PSE is a spin-out of Imperial College London, and its software is also used for research and teaching in some 200 universities around the world.

The company's own ability to innovate was recognised with the award of the prestigious Royal Academy of Engineering MacRobert Award for Engineering Innovation, the highest UK engineering prize.

About gPROMS

gPROMS[®] is the world's leading advanced process modelling environment. gPROMS models are used to explore the design or operational decision space to provide accurate predictive information for decision support. This helps companies reduce time-to-market for new processes or products, manage development risk, improve designs, enhance production, reduce capital and operating expenditure and ensure better compliance with safety, health and environmental requirements.

The package is applied in all sectors of the process industries, with particular focus on modelling of complex operations such as reaction, separation, crystallisation and polymerisation. PSE also supplies a range of process engineering tools built on the gPROMS platform, including gFUELCELL®, gSOLIDS®, gCRYSTAL® and gFLARE®.

gPROMS is applied across the process lifecycle and at multiple scales, from laboratory experimentation, through process and detailed design, to online operation, and is central to a model-based engineering approach. PSE is committed to maintaining gPROMS at the leading edge of process modelling technology