

## Made In The Cloud: Meet The Companies Leading The Manufacturing Sector's Digital Revolution

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## Data Integration across the Supply Chain: From Art, to Part, to Fulfillment

LATROBE, Pa., Sept. 4, 2014 /PRNewswire/ -- Why would a company long known for perfecting production tooling spend years developing an open-source digital application that supports any kind of manufacturing process (whether additive or subtractive)?

For Kennametal, the company that did it, it's all about what you know. Making even the simplest component requires answers to many questions, from design to end use: Is it a one-time custom item, or something that has to be mass-produced in locations around the world? Will the finished product be subjected to potentially damaging conditions, like corrosion?

"The real money for manufacturers lies in knowledge to eliminate that guesswork: engineers and technicians who know how to optimize production, as well as chemists and material scientists to ensure the final product will perform as promised," says Kennametal Chairman, President and CEO Carlos Cardoso.

With more than 2.7 million Baby Boomers slated to retire from the U.S. manufacturing sector alone over the next decade, the industry faces a dwindling supply of knowledge workers. To offset the demographic decline, industry leaders have gone digital, amassing what they know into software that runs detailed analytics on production processes, with a suite of tools enabling collaboration across the supply chain to optimize productivity and performance.

To explore how they're doing it, Kennametal will host a panel discussion of companies enabling cloud-based manufacturing facilitated by renowned futurist <u>Jim Carroll</u> during this year's International Manufacturing Technology Show (IMTS) in Chicago on Tuesday, Sept. 9, 2014 at 8:30 a.m. CT, McCormick Place, West Hall, Booth W-1522:

Moderator: Jim Carroll, Futurist, Author (The Future Belongs To Those Who Are Fast)

## Panelists:

Pete Dragich, VP, Integrated Supply Chain Logistics, Kennametal, leading provider of advanced materials, production tooling and mission-critical components for industry;

Dan Frayssinet, CEO, DP Technology, developer of the ESPRIT high-performance system for a full range of machining applications;

Andreas Haimer, CEO of Haimer GmbH / Haimer Group, developer of innovative, high-precision products for diverse metal cutting and machining applications;

John Reed, EMEA Marketing Manager, CG Tech, experts in numerical control (NC/CNC) manufacturing systems and analysis software; and

Alexander Zoller, CEO, ZOLLER Inc., leader in testing and measurement software for manufacturing processes;

Kennametal launched its cloud-capable NOVO™ software last fall as a virtual advisor that informs production planning with the best available data. This year, the company extended it with a suite of tools called NOVOsphere™ that offers seamless connectivity in the Machining Cloud™ to drive supply-chain efficiencies and collaboration across CAD/CAM, machining simulations, setup, production, inventory management, and e-commerce. Kennametal is proving the concept with a range of technology partners using it at different points in the supply chain. For example, DP Technology imports tooling data via NOVO into its latest version of ESPRIT cloud-enabled CAM software, while Siemens uses NOVO data to improve cutting cycles, spindle dynamics and other critical machining functions in its control packages.

The resulting collaboration in NOVOsphere saves engineers, programmers and producers time in production planning while making machine controls more efficient and reliable. Next comes the ability to deliver savings based on performance data drawn directly from shop floor equipment. To accomplish that, Kennametal this year will launch its NOVO Optimize <sup>™</sup> analytics tool to capture real-time data on machine performance and identify available process improvements to increase throughput.

"With our suite of NOVO solutions, we can draw data from any connectable source in the shop and provide proven process knowledge to get the job done faster and more efficiently. This is music to the ears of every manufacturer who's concerned about capital and talent resources," says Cardoso.

## About Kennametal Inc.

Celebrating more than 75 years as an industrial technology leader, Kennametal (NYSE: KMT) delivers productivity to customers seeking peak performance in demanding environments. The company provides innovative wear-resistant products, application engineering and services backed by advanced material science, serving customers in 60 countries across diverse sectors of aerospace, earthworks, energy, industrial production, transportation and infrastructure. With approximately 14,000 employees and nearly \$3 billion in sales, the company realizes half of its revenue from outside North America, and more than 40% globally from innovations introduced in the past five years. Recognized among the "World's Most Ethical Companies" (Ethisphere); "Outstanding Corporate Innovator" (Product Development Management Association); and "America's Safest Companies" (EHS Today) with a focus on 100% safety, Kennametal and its foundation invest in technical education, industrial technologies and material science to deliver the promise of progress and economic prosperity to people everywhere.

SOURCE Kennametal Inc.

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