## **Boeing Expanding Its Global R&D Initiatives**

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Relationships established with three major UK universities

The Boeing Company announced today it has established multi-year collaborative R&D relationships with Cambridge, Cranfield and Sheffield Universities in the United Kingdom to work on a variety of advanced information, aeronautics and manufacturing technologies.

"These relationships reflect Boeing's initiative to seek the best technologies and talent around the world to help us define the future of aerospace," said Phil Condit, chairman and CEO of The Boeing Company. "They also reflect our great respect for the quality of research being done in British universities and the growing strength of our relationship with the United Kingdom."

Boeing relies heavily on colleges and universities to provide innovative ideas and leading edge technologies that can improve the performance, quality and cost of its products and services. While traditionally these schools have been in the U.S., Boeing is expanding its efforts to establish long-term collaborative relationships with top universities around the world.

"Innovation is key to our future growth, and we will find a greater diversity of innovative ideas and talent the farther we reach out around the world," said George Muellner, former head of the Boeing Phantom Works R&D division, which spearheads the company's international R&D initiatives, including with universities. Muellner was recently appointed vice president -- general manager of Air Force Systems for the new Integrated Defense Systems business unit of Boeing.

At each of Cambridge, Cranfield and Sheffield University, Boeing has entered (or is entering) into a multi-year, multi-million dollar agreement to conduct research and other activities in areas of the different schools' specialties. The company also plans to identify Boeing executive focal points for each of the universities, who will help develop and maintain an interactive, mutually beneficial, strategic partnership that builds upon Boeing's and the universities' existing strengths.

With Cambridge University, Boeing is completing the terms of an agreement to conduct R&D in the area of information technology. Cambridge is a recognized leader in IT research, and its work in such areas as automated reasoning, intelligent systems, natural language and information processing, information manipulation and information security are of particular interest to Boeing as it moves toward providing more integrated solutions to its customers.

"The direction of modern defense, air traffic management and communications systems is all toward information- and network-centric solutions that can effectively integrate complex systems-of-systems so that they can perform their designed function with maximum speed and efficiency," Muellner said. "These challenges are global in nature, and we're looking to Cambridge to help us find global solutions."

With Cranfield University, Boeing is working on a variety of projects that reflect this university's reputation and expertise in the areas of aviation, aeronautics and aircraft development. One is the design and production of a sub-scale (21-foot wingspan) demonstrator of a Blended Wing Body aircraft, which is being done by Cranfield's wholly owned commercial subsidiary, Cranfield Aerospace Ltd.

"For almost a decade Boeing has been studying the aerodynamic advantages of this promising concept, which could have a variety of military and commercial applications," Muellner said. "Cranfield is doing an excellent job in helping us through this next stage of research."

In addition to the Blended Wing Body research, Boeing is also collaborating with Cranfield on air traffic management simulation modeling, fuel-cell driven aircraft design, and an MBA program focused on project management for aerospace industry. Dan Mooney, vice president of product development for the Boeing Commercial Airplanes business unit, has been identified as the executive focal point for this university.

At Sheffield University, Boeing is working with their recently established Advanced Manufacturing Research Center to develop advanced technologies for materials-cutting, materials joining, metal working, castings and preformed materials. Such technologies are needed to help reduce the cycle time and cost of producing aerospace products while improving their quality and performance.

"The new Advanced Manufacturing Research Center at Sheffield provides Boeing with a top quality manufacturing R&D facility in Europe," Muellner said. "Our work together here will not only yield breakthroughs in manufacturing technology that we can use directly, it will also allow us to transfer our results to our suppliers so that they can enhanced their capabilities and performance as well."

The Boeing Company, headquartered in Chicago, III., is the world's leading aerospace company and the No. 1 U.S. exporter. It is the largest manufacturer of satellites, commercial jetliners and military aircraft, and it

provides a full range of lifecycle support for these and other products. The company is also a global market leader in missile defense, human space flight and launch services. Boeing capabilities also include financial services, advanced information and communications systems, and the Phantom Works advanced research and development unit, which serves as a catalyst of innovation for the enterprise.