

One of Dr. Karl Reid's great research contributions was the creation of the Web Handling Research Center (WHRC). The creation of this research center was part of a larger thrust area in automated manufacturing that Dr. Reid was developing while he was Head of Mechanical and Aerospace Engineering and later as Dean of the College of Engineering, Architecture and Technology. Today web handling is known as Roll-to-Roll (R2R) manufacturing but in 1986 it was known as web handling. It is a type of manufacturing that all production engineers would aspire to use as it minimizes production costs by maximizing automation. This manufacturing process involves the buildup of consumer products on a thin media called a web that can be transported and processed through machines. Transport of a thin delicate web through a process machine is difficult and provided a ripe focus area for a new research center that did not exist elsewhere in the world. Dr. Reid created the WHRC by first proposing it to the National Science Foundation as a viable Industry/University Research Cooperative. NSF elected to support the research center on the condition that 8 industrial sponsors also agreed to provide support. Dr. Reid was able to garner the industry support and the research center opened in 1986 and continued until the fall of 2019.

From my perspective (Dr. J. K. Good) I can tell you that this research center subsidized the education of over 100 master of science and 20 doctor of philosophy students and provided them with excellent thesis topics. I was but one faculty member who participated in this research center and so the total number of students that benefited from this center was much larger. Many industries benefited from the results of the research center. Many of the students benefited from employment after degree completion by working for sponsor companies. These were industries that did not necessarily participate in OSU's career fair but benefited from observing the student research progress, sort of a long-term interviewing process, before making a graduate an offer. From a theoretical perspective this research was filled with potential topics with dynamics, solid mechanics, fluids, thermal sciences and controls. This was the reason this research center succeeded in a university environment, it balanced academic theoretical development with industrial needs for optimized manufacturing. The WHRC achieved fame nationally and worldwide by sponsoring International Conferences on Web Handling where authors from around the world would present theoretical developments in this area of manufacturing. The WHRC also provided outreach to engineers working in web process industries through a Web Handling Seminar short course. This short course was designed bring engineers to a working level in this niche area of manufacturing not formally taught within engineering degree programs. The WHRC was the epitome of the mission of Oklahoma State University in conducting research, educating and providing outreach to the world in this important manufacturing area. All of this was the creation of Dr. Karl Reid and the body of knowledge that resulted is one of his legacies.