

Study examines how manufacturers can rapidly change product design

In an economy where cell phones are beginning to have the same shelf life as ice cream, manufacturers need to get much better at matching their production schedules to ever-changing consumer demand, according to a University of Windsor researcher.~

Engineering professor Zbigniew Pasek has received a five-year \$85,000 grant from the Natural Sciences and Engineering Research Council to examine and document the best practices manufacturers use to reduce the risks associated with producing perishable goods.

And as products rapidly change to meet the desires and needs of more sophisticated, better educated consumers in a global economy, the very definition of "perishable" is changing, Dr. Pasek says.

"What used to be called durable goods, because of their shortening lifespan, are entering the domain of consumable goods," Pasek explains. "Many manufacturers of things like electronics are becoming almost like ice cream makers. They can't have goods sitting around in a warehouse because consumer tastes may have changed by the time they get to market."

Manufacturing large volumes of those goods based on flawed market research can financially ruin a company, he says.

Pasek and his doctoral student Foad Hassanmirzaei will categorize the various risks that manufacturers face while modelling the systems used by companies that best utilize information about customer demand into their production schedules.

The results of the research should be able to offer production companies better methods to deal with changing market dynamics. Pasek says the work will help those companies better control their production volume and mix to help lower the risks, while dealing with varying degrees of product complexity.



Industrial and Manufacturing Systems Engineering professor Zbigniew Pasek and his doctoral student, Foad Hassamirzaei, will be modelling best practices used by companies to design better products based on consumer demand.