

Dow Chemical Joins Resilience Program

In an age of global turbulence, resilience is a key competency for multinational corporations. To promote the importance of enterprise-wide resilience and the need for the manufacturing sector to seek constant improvement, Dow Chemical Co. is sponsoring a two-year collaborative research project with Ohio State's Center for Resilience, combining resources from the university's College of Engineering and Fisher College of Business as well as the Air Force Institute of Technology.

"The chemical industry is dependent on its ability to operate and deliver chemical products reliably, safely, securely and in a sustainable manner — so terms like risk management and resilience are more than industry buzz words, they are truly business and supply chain imperatives," says Darrell Zavitz, Dow's vice president of Business Process Services Center, Supply Chain and Customer Services. "Ohio State has developed some unique capabilities that we believe will help us to better measure and manage our global resilience in a variety of challenging business environments, so we can recover from disruptions, adapt to change and design more sustainable supply chains."

The project, launched in December, builds upon a proprietary, Internet-administered tool called SCRAM, an acronym for Supply Chain Resilience Assessment and Management, developed by the Center for Resilience. This trademarked tool helps companies understand their supply chain vulnerabilities, such as resource bottlenecks, and the capabilities that they can deploy to improve resilience, such as increased procurement flexibility. The project will help to support Dow's strategic decision making by linking the SCRAM model with quantitative supply chain performance indicators.

The Ohio State project team has worked closely with a cross-functional team at Dow to develop and pilot a new approach for resilience assessment and modeling. The first group to pilot test the approach was the Sentricon business, part of Dow AgroSciences based in Indianapolis. Sentricon markets unique systems for termite colony monitoring and elimination using extremely small amounts of pesticides.

"The team applied the SCRAM tool to identify potential resilience gaps and worked with Sentricon to simulate the response of its supply chain to various types of disruption scenarios, such as supplier outages," says Joseph Fiksel, executive director of the Center for Resilience and a senior research scientist in integrated systems engineering. "This provided Sentricon with insights about alternative ways to structure its supply chain in order to maintain profitability and avoid lost sales."

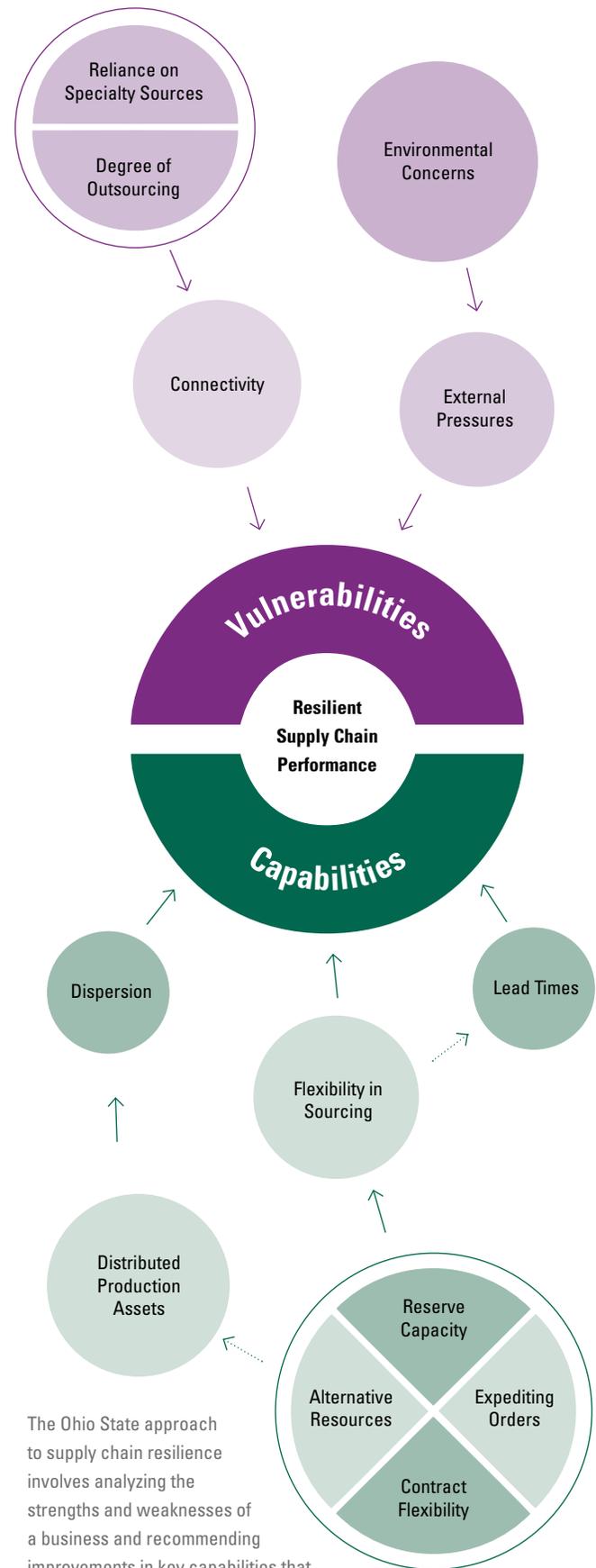
"The old methods of risk management are no longer effective in a global economy that is tightly connected and unpredictable," says Fiksel. "Companies must cope with a continuous stream of surprises, ranging from industrial accidents to economic shocks to natural catastrophes. Resilience is about configuring company assets, including both human and economic capital, in a way that maximizes the capacity of the enterprise to survive, adapt and grow in the face of turbulent change."

The Dow project will extend the Ohio State resilience framework in several ways. First, SCRAM will be customized to better fit Dow's global business model and will be coordinated with Dow's sustainability commitments, which integrate economic, environmental and social responsibility with "the human element." Eventually, it will be linked with Dow's supply chain analytical tools and incorporated into work processes for managing existing supply chains and designing new ones.

Contact:

Joseph Fiksel, (614) 688-8155, fiksel.2@osu.edu

On the Web: Center for Resilience, resilience.osu.edu



The Ohio State approach to supply chain resilience involves analyzing the strengths and weaknesses of a business and recommending improvements in key capabilities that will offset its inherent vulnerabilities. For example, reliance on single-source specialty suppliers represents a common vulnerability that can be offset through increased flexibility and reserve capacity.