1116-L1-2260 Irina Seceleanu* (iseceleanu@bridgew.edu), Bridgewater, MA 02325, and Ward Heilman,
Matthew Shipman and Robert Guillette. "Wherehouse" Route Optimization Software for the
Warehouse Picking Problem.

A well-known problem in warehouse management is the Warehouse Picking Problem (WPP), which has the goal of visiting each item in an order to be picked in the shortest possible path through a warehouse. With as much as half of the operating expenses in a warehouse associated with the cost of order picking, reducing the cost of the labor-intensive picking process can lead to significant efficiencies in a warehouse. The essence of the difficulty underlying this problem is the fact that the WPP is a variation of the Traveling Salesperson Problem, and thus is intractable for large pick sizes. In this talk we present software designed as a tablet-based application, under the aptly named title "Wherehouse", in which we employ various heuristic algorithms to find reasonable solutions to the WWP. This work was performed as part of the Center for Entrepreneurship Studies at Bridgewater State University, which promotes student and faculty research into problems of importance to business. The "Wherehouse" software is now being licensed and will be marketed to businesses with small to moderately-sized warehouses. We discuss the process which led to this collaboration between business and academia, the funding model for the product development and demonstrate the product produced. (Received September 22, 2015)