



Dynamic Real-Time Available-to-Promise for Global Make-to-Order Supply Chains



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Project Overview



Scope: business processes related to receiving, accepting, processing, and fulfilling customer orders in global make-to-order supply chains.

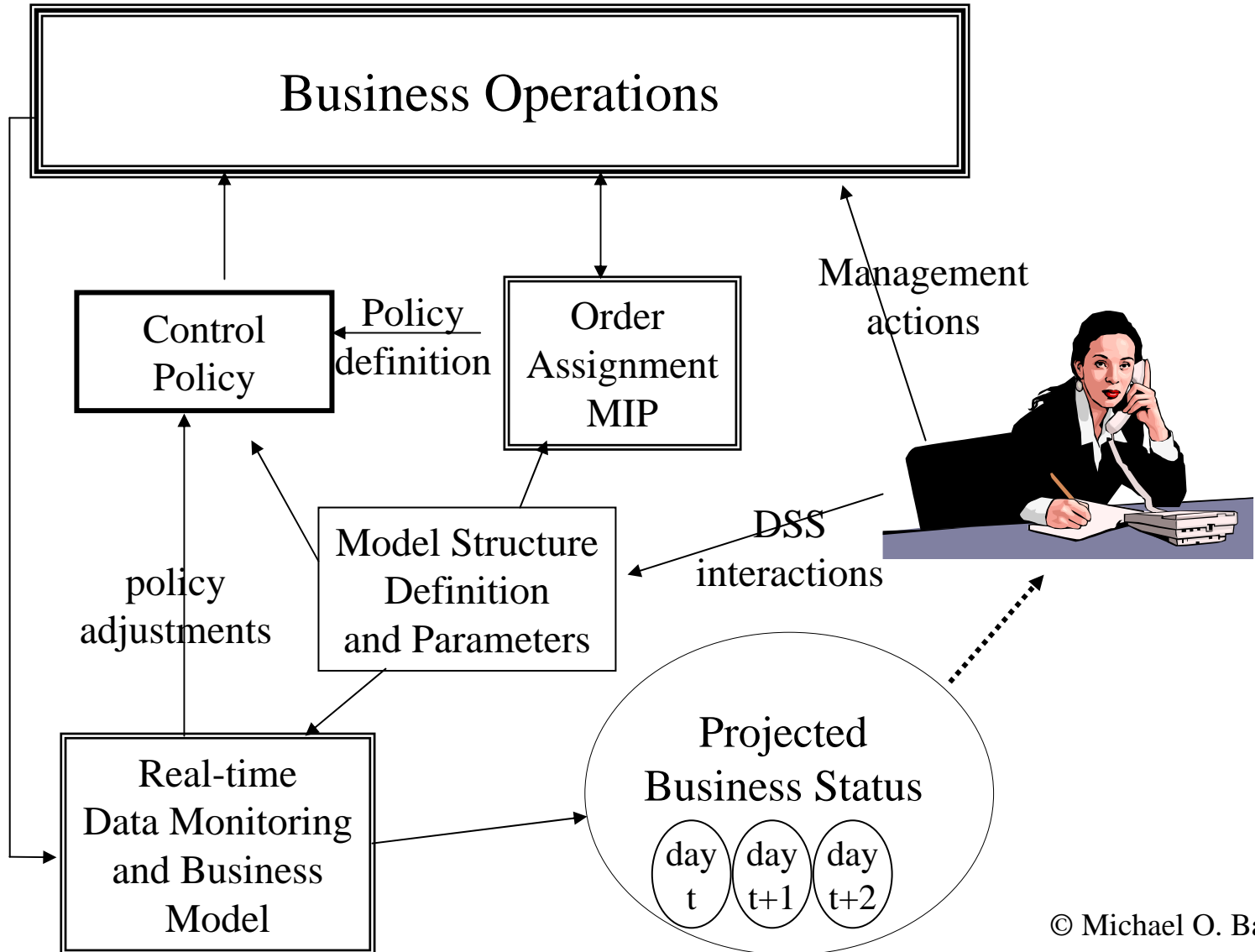
Major data sources: customer order streams, factory flows and status.

Research challenges:

- *How best to dynamically and continuously update projections of demand, supply, and associated production capacity throughout the entire supply chain, as well as to direct future data gathering efforts to improve model predictions.*
- *Which models and algorithms are most effective at exploiting the available real-time data for decision making: both long-term planning and short-term execution.*

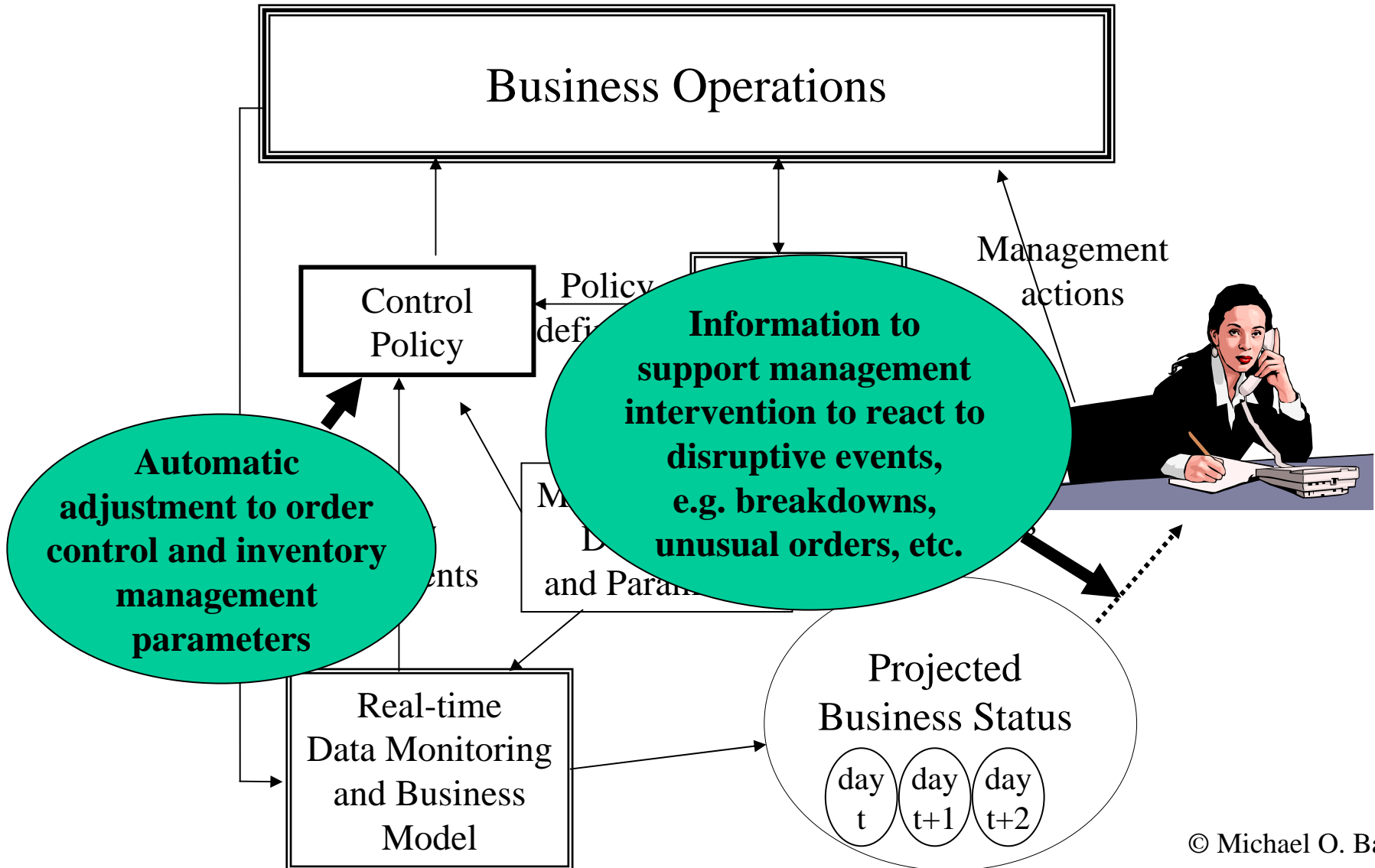


Model Support for Business Decision Making



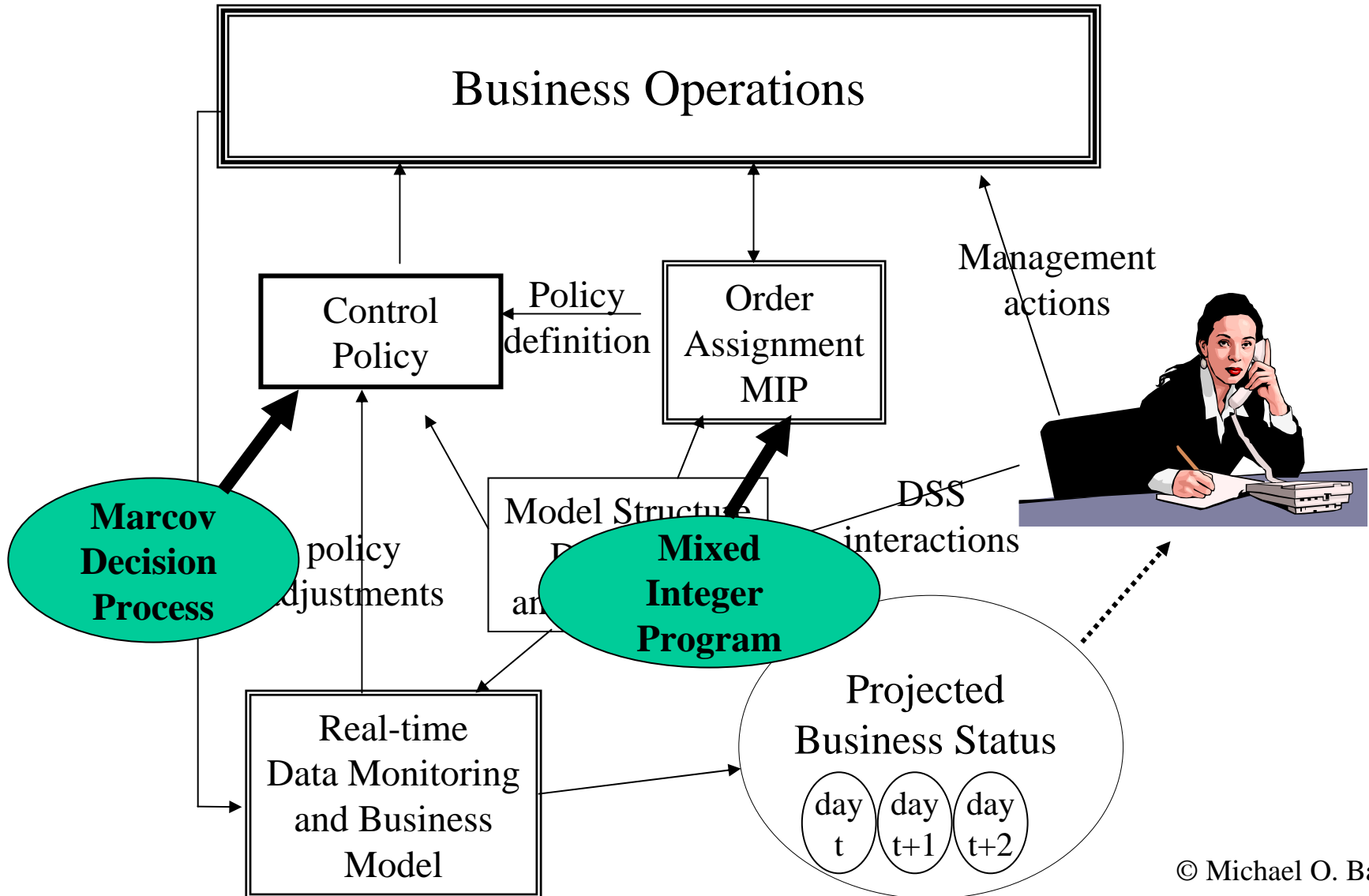


Model Support for Business Decision Making





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DDDAS Challenges



- Monitoring and processing real-time business data streams
- Dynamically adjusting performance of models based on real-time data:
 - Control policies
 - Simulation predictions
- Adjusting control policies based on human intervention