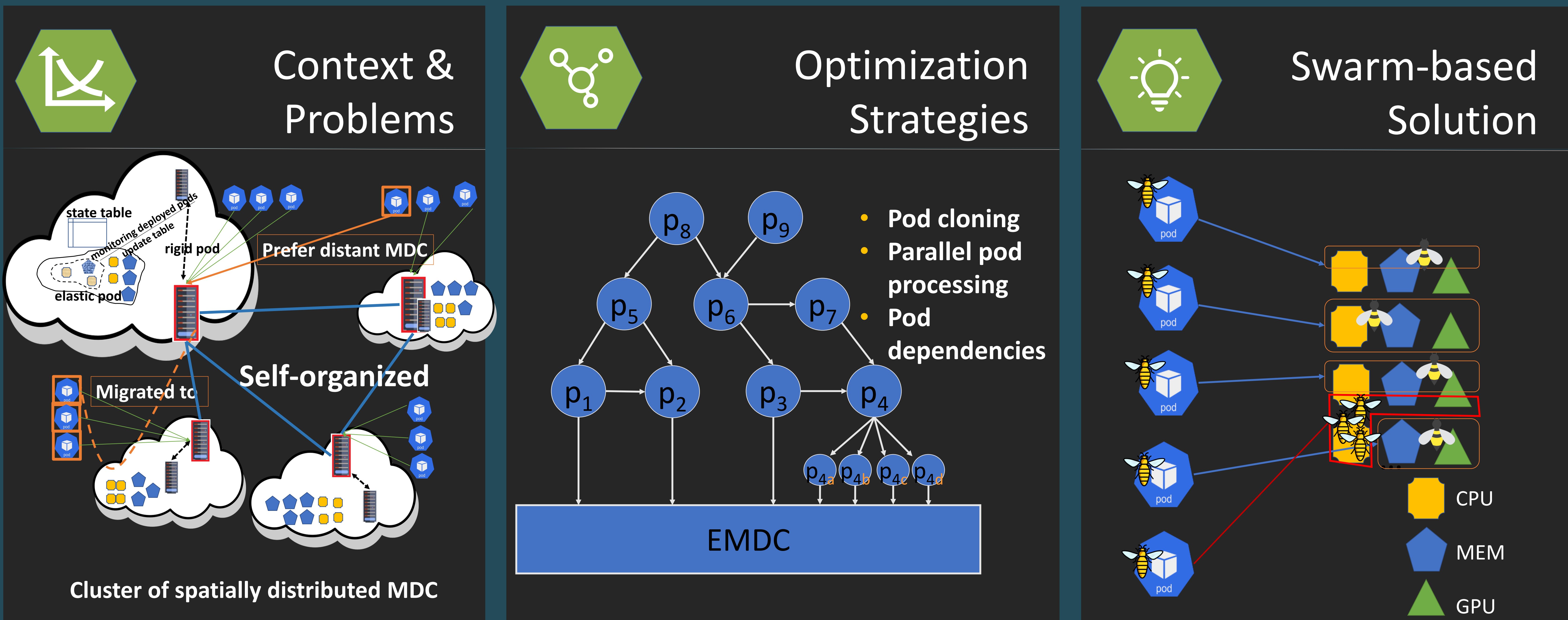


# Bottom-Up Resource Orchestration in Edge Computing: A Pod Profile-Aware Agent-Based Approach

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## Key Outcomes

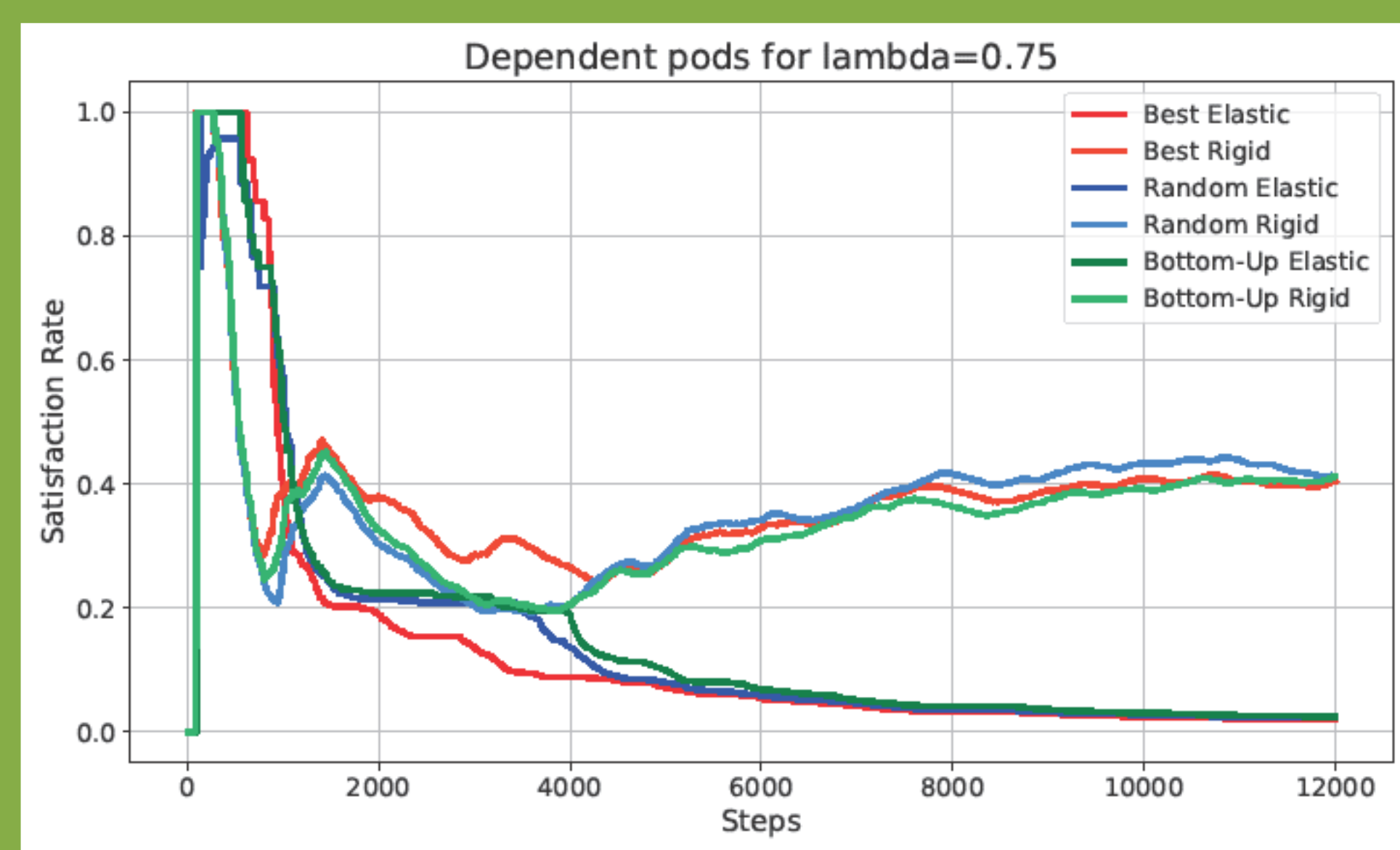


Fig. 1. 30% elastic and dependent pods with  $\lambda=0.75$

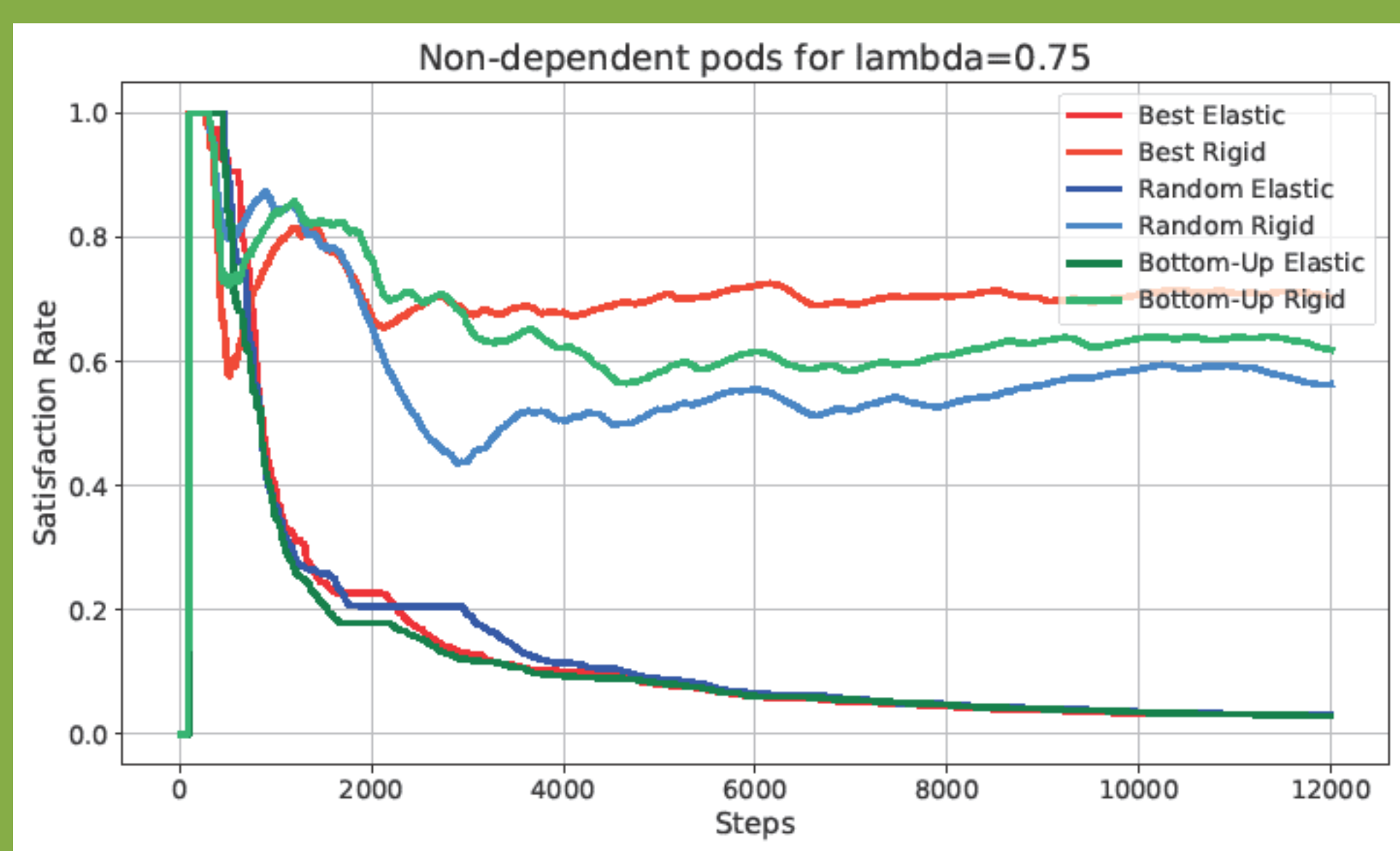


Fig. 2. 30% elastic and independent pods with  $\lambda=0.75$

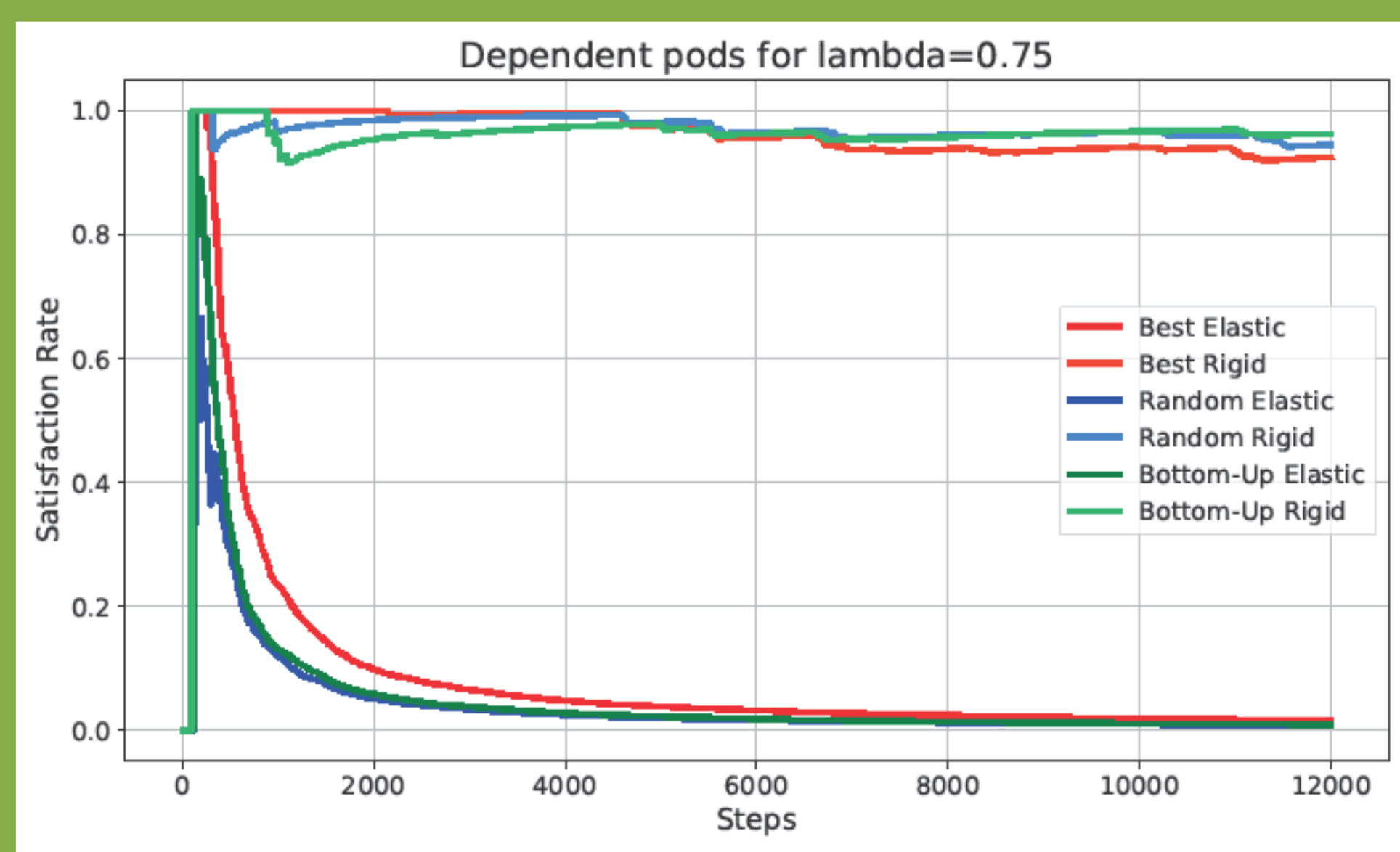


Fig. 3. 70% elastic and dependent pods with  $\lambda=0.75$

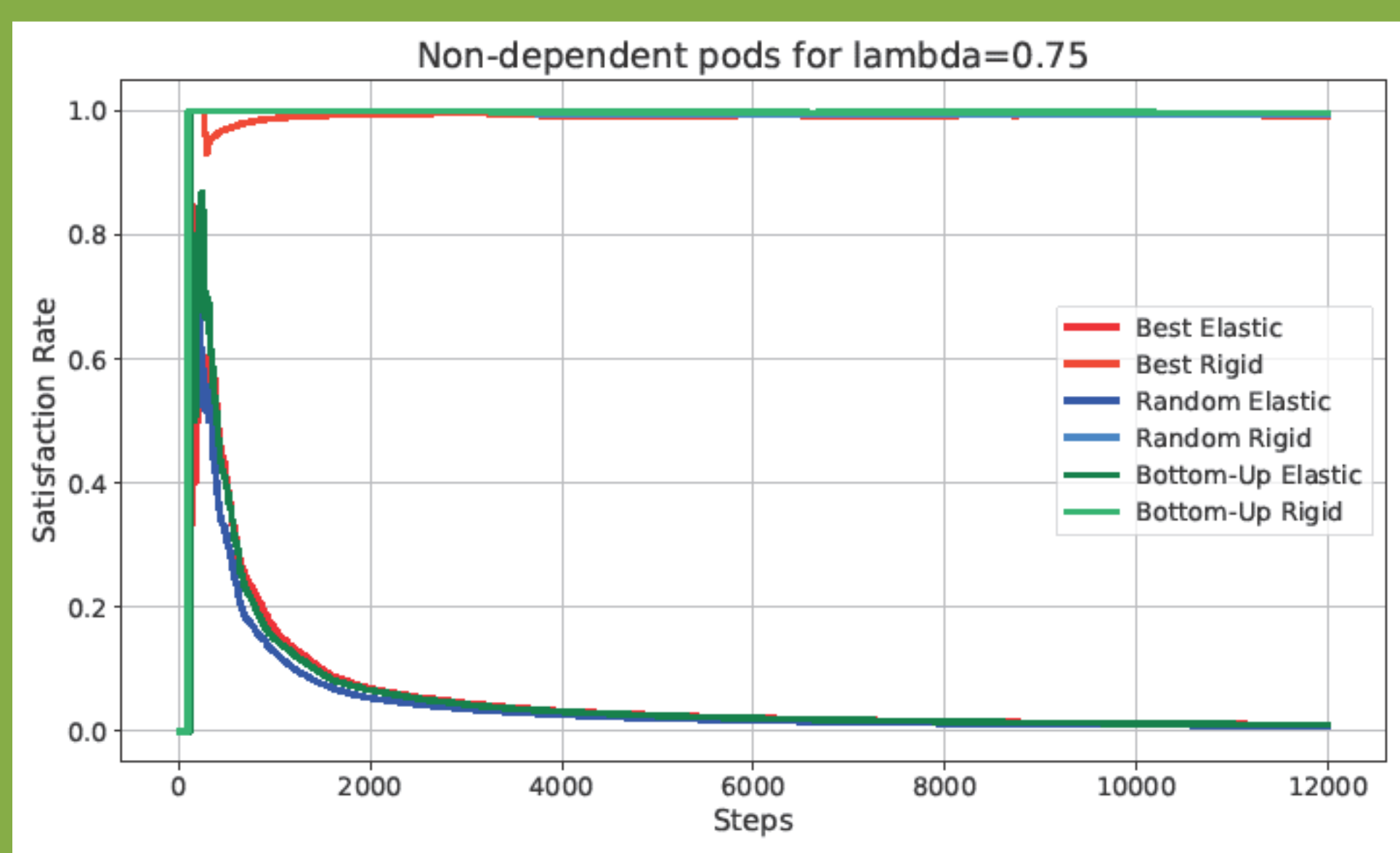


Fig. 4. 70% elastic and independent pods with  $\lambda=0.75$

## Impact

- **Pod elasticity** improves satisfaction via flexible resource allocation, especially under SI strategy
- **Coordination mechanisms** add complexity and slightly reduce satisfaction
- **SI strategy** remains resilient, keeping satisfaction high even under complex workloads