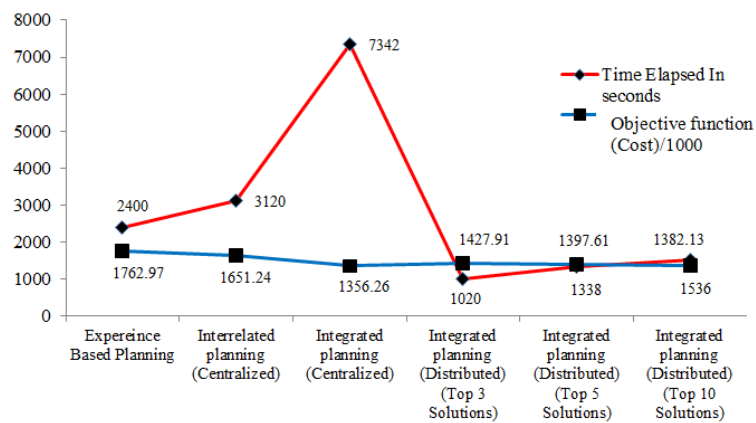


Decision making in Intelligent Factory: Conventional ERP and MES tools are typically centralized in their operations and thus have limited capabilities for dynamic adaptation of the production plan required for any intelligent or smart factories. We recently designed an agent-based decision making system which utilizes intelligence and communication capabilities of any smart factory. The approach provides quick response to dynamics conditions. The results of comprehensive investigation reveal colossal reduction in computation time (47 to 86 percent) and 0.05 to 38.5 percent economic improvements over centralized approach under dynamics conditions. The results are breakthrough in the field of smart manufacturing, especially from operations planning perspective.



Performance of integrated yet distributed approach over conventional approaches