



IIT ROORKEE



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CERTIFICATION COURSE

SUPPLY CHAIN ANALYTICS

Trends, Challenges and Future of Supply Chain

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Trends in Supply Chain

- Customer Service to Relationship Management
- Adversarial to Collaborative
- Forecast to Endcast
- Experience to Transition Strategy
- Absolute to Relative Value
- Functional to Process Integration
- Vertical to Virtual Integration
- Information Hoarding to Sharing
- Training to Knowledge-Based Learning
- Managerial Accounting to Value-Based Management



Risks in Future Supply Chain management

- (1) dependence on real time connectivity;
- (2) channel balance of power;
- (3) vulnerability of global operations; and
- (4) vulnerability stemming from strategic integration, information sharing, and technology investment.



Smart Supply Chains

- (1) information in supply chains;
- (2) IT;
- (3) process automation;
- (4) advanced analytics; and
- (5) process integration and innovation.



Information

- Information will remain critical to the success of SCM.
- Most of the existing literature focusses on demand (or order) information management along the supply chains.
- Information is very important in a dynamic environment that involves uncertainties and disruptions.
- Specifically, demand information visibility can cut lead times, reduce associated costs, improve responsiveness, and enhance decision making

IT

- IT lays a backbone role in facilitating information flows in supply chains.
- The IoT is a network of hardware, software, devices, databases, objects, sensors, and systems, all working at the service of humanity.
- The IoT is a technological revolution in computing and communications which leads to vision of “anytime, anywhere, any media, anything” communications.
- The IoT allows digital and physical entities to be linked to enable a whole new class of applications and services.



Process Automation

- Technological advancements are driving the process automation revolution.
- Firms can develop smart applications at all possibility to do the job without human intervention and errors.



Advanced Analytics

- Business analytics is a process through which mathematical techniques and functional knowledge are combined to yield actionable insights.
- Advances in “big data*” software tools and analytics techniques provide the possible means to process the massive quantities of data generated by numerous intelligent devices.
- Mathematical models are especially useful in dealing with the complex situations like those often encountered in supply chains, for example, suggesting explanations for observed events such as unanticipated build-ups of inventory.

(* Big data is unique because of the volume, variety, and velocity of the data.)



Process Integration and Innovation

- Integrating effective supply chain practices with information sharing across supply chain stages is a critical point for improving performance in supply chains.
- Integration is a multidimensional concept that covers the different organizational levels of the company: corporate through attitudes; strategic through patterns; and operative through practices.
- The so-called “third industrial revolution” is essentially the integration of advanced analytics, adaptive services, and digital manufacturing in supply chain settings.

THANK YOU

