

Project Procurement and Supply Chain

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PMG 433

Lecture 3



Plan, execute and control of supply-chain projects

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Course Agenda

Chapter

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- 1-Discuss the meaning of supply chain project management.
 - 2-Understand the role of project management in the supply chain optimization.
 - 3-Explaining how to streamline the supply chain management with project management.
 - 4-Discussing the challenges and solutions in integrating the project and supply chain management.
 - 5- Identify the supply chain project management methodology

"Plan, execute and control of supply-chain projects" means:

Planning, implementing, and monitoring projects related to the supply chain to ensure they achieve their objectives efficiently and effectively.

Explanation:

- **Plan** : Define the project's goals, resources, budget, schedule, and activities.
- **Execute**: Carry out the planned activities and coordinate the people, materials, and processes involved.
- **Control**: Monitor progress, measure performance, identify problems, and take corrective actions when necessary.

Example:

A company wants to build a new distribution center:

- 1.Plan** the location, budget, and timeline.
- 2.Execute** the construction and equipment installation.
- 3.Control** costs, schedules, and quality to ensure the project is completed successfully.

Example

If a company wants to implement a new warehouse management system:

- **Plan:** Determine requirements, costs, timeline, and project team.
- **Execute:** Install the system, train employees, and migrate data.
- **Control:** Monitor the implementation, resolve problems, and ensure the project stays on schedule and within budget.

- ❑ **It involves** managing the flow of supplies through all stages of the production cycle including the sourcing, production, and distribution of products or services from raw materials to end customers.
- ❑ A series of interconnected processes span across different functions within an organization and often extend to external partners.
- ❑ The primary components of SCM include suppliers, manufacturing, production, distribution, inventory management, information systems, and customer service.

- ❑ **Project management** is the discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives.”
- ❑ **Project management** is as good as managing a business or an organization.
- ❑ **The project management** involves planning, coordination, execution and evaluation.
- ❑ These are the basic activities undertaken in any organization.
- ❑ It is very important to develop meaningful and achievable project deliverables.
- ❑ Attempting an unachievable result is waste of money, time and effort.

Project Management (PM)

- ❑ It entails the application of processes, methods, skills, knowledge, and experience to develop and reach specific project objectives within agreed parameters, according to project acceptance criteria.
- ❑ The final deliverables of **PM** are constrained by a finite budget and timeframe.
- ❑ Key elements of PM include **scope, schedule, quality, cost, risk, and procurement.**

Key Elements Often Included in Project Management

- **Scope Management** – Defining and controlling what work is included in the project.
- **Time Management (Scheduling)** – Ensuring the project is completed on time.
- **Cost Management** – Planning and controlling the project budget.
- **Quality Management** – Ensuring project deliverables meet required standards.
- **Risk Management** – Identifying, analyzing, and responding to project risks.
- **Resource Management** – Managing people, equipment, and materials.
- **Communication Management** – Sharing information among stakeholders.
- **Procurement Management** – Acquiring goods and services from external suppliers.
- **Stakeholder Management** – Identifying and engaging individuals or groups affected by the project.

What is Supply Chain Project Management?

- ❑ A supply chain project is a distinct attempt to deliver a set of identified and agreed deliverables with given resources and within agreed time frame and financial budget in order to elevate the current supply chain operations into next level of targeted excellence.
- ❑ The projects could address Strategic Improvement; Technological Improvement; Structural Improvement; and Supply Chain Performance improvements.

What is Supply Chain Project Management?

- ❑ Supply chain project management refers to the process of planning, executing, and controlling projects within the context of a supply chain or logistics operation.
- ❑ It involves the application of project management principles and practices to ensure that specific supply chain-related projects are completed successfully, on time, within budget, and with the desired outcomes.

❑ Identifying Project Management within Supply Chains

- While Supply Chain Management focuses on the ongoing flow of goods and services, Project Management plays a critical role in planning and driving improvements within this complex system.
- Effective project managers must have a deep understanding of the supply chain environment in which they operate. This means more than just grasping procurement processes and systems; it involves comprehending the holistic nature of SCM.
- This integration extends beyond procurement to encompass vital functions like operations management, manufacturing, logistics, and beyond.

- ❑ **For project-based organizations**, this issue is even more critical, as the supply or back-end portion of the chain is typically long, and without the total involvement of each and every supplier, value enhancement and project supply chain performance will be less than optimal.
- ❑ **For example**, in the case of highly technical projects, it is not a typical to have fifth or even sixth tier suppliers upstream in the project supply chain . Managing the dynamic interrelationships and interactions that exist among these suppliers is considerably more complex and requires the effective integration of these supplier and their project activities into the larger framework of supply chain management.

- ❑ Conversely, supply chain managers must also be well-versed in PM skills to successfully adapt to changes and implement supply planning improvements.
- ❑ **PM** revolves around delivering value by developing or modifying products, systems, and processes.
- ❑ In today's dynamic landscape, project managers have an array of tools at their disposal, including methodologies like Waterfall, Agile, and Lean Six Sigma.

- ❑ A fascinating trend on the horizon is the rising demand for supply chain project managers.
- ❑ These professionals possess the unique blend of SCM expertise and PM skills required to lead initiatives aimed at enhancing supply chains.
- ❑ With the ever-accelerating pace of change driven by factors like technology, geopolitics, and global events such as the pandemic, the future looks exceptionally promising for supply chain project managers.
- ❑ Their ability to navigate these complex dynamics positions them as invaluable assets in the evolving business landscape.

❑ The Importance of Project Management Methodologies

- **Effective PM** relies on established methodologies and best practices.
- Two widely adopted methodologies in supply chain optimization are Six Sigma and Lean.
- **Six Sigma** aims to reduce defects and variations in processes, while Lean focuses on eliminating waste and enhancing efficiency.
- Both methodologies provide structured approaches to tackle specific projects aimed at improving supply chain performance.

1. Project Management in Procurement

- Efficient procurement is a cornerstone of a well-functioning supply chain.
- Project management, led by a project manager, can be applied to procurement processes to identify cost-saving opportunities, streamline supplier relationships, and ensure timely delivery of raw materials, or components.
- This involves managing projects related to supplier selection, negotiation, and performance monitoring.

2. Enhancing Distribution and Logistics with Projects

- Distribution and logistics involve the movement of goods from production facilities to distribution centers and ultimately to end customers.
- PM tools and software are essential for optimizing these processes.
- Supply chain managers can lead projects aimed at route optimization, warehouse layout improvements, and transportation management system enhancements, all of which reduce transportation costs, minimize delivery times, and enhance overall supply chain visibility.

3. Inventory Management Projects

- Inventory management is a critical area where PM can have a significant impact.
- Project managers can lead initiatives focused on implementing just-in-time (JIT) inventory systems, demand forecasting improvements, and ABC analysis.
- These projects are designed to reduce carrying costs, minimize stockouts, and improve inventory turnover rates, ultimately contributing to efficient supply chain management.

1. Overcoming Resistance to Change

- Implementing project management practices within established supply chain processes may face resistance from supply chain managers and professionals accustomed to traditional approaches.
- Addressing this challenge requires effective change management strategies, including training, clear communication, and demonstrating the benefits of project management in managing projects.

2. Selecting the Right Project Management Tools and Software

- Selecting the appropriate project management tools and project management software is crucial for supply chain project managers.
- These tools enable project managers to plan, execute, and monitor projects effectively.
- Careful consideration should be given to tools that align with supply chain management needs, ensuring efficient project management and risk management.

3. Ensuring Collaboration and Communication

- Effective collaboration and communication are essential for successful integration.
- Cross-functional teams, led by supply chain project managers, should work together to ensure that projects align with supply chain goals and priorities.
- Regular status updates and reporting mechanisms are critical for transparency and accountability, reducing project risks and enhancing overall project management.

Here are some examples of companies that successfully integrate **Project Management (PM)** and **Supply Chain Management (SCM)**:

Toyota

How they integrate PM and SCM:

- Uses project management to coordinate new vehicle development projects.
- Applies supply chain management through its **Just-in-Time (JIT)** system to minimize inventory and reduce waste.
- Project teams work closely with suppliers to ensure parts arrive exactly when needed.

Result: Lower costs, higher efficiency, and faster production cycles.

Dell Inc.: Project-Driven Supply Chain Transformation

- **Dell's supply chain** transformation is a testament to the power of project management in managing projects and mitigating project risks.
- Dell revolutionized the computer industry by implementing a direct-to-consumer model and a build-to-order approach, all managed by supply chain project managers.
- PM played a pivotal role in executing this transformation, allowing Dell to reduce inventory levels, cut costs, and improve customer satisfaction.

Apple Inc.: Supply Chain Innovation through Project Management

- **Apple's supply chain** is renowned for its efficiency and innovation, largely due to the effective integration of project management.
- Supply chain project managers oversee projects that involve precise coordination among suppliers, manufacturers, and logistics partners, ensuring that products reach global markets seamlessly.
- This project-driven approach is instrumental in managing Apple's complex supply chain and mitigating project risks.

Apple

How they integrate PM and SCM:

- Uses project management to oversee the development and launch of products such as the iPhone and Mac.
- Coordinates a global network of suppliers, manufacturers, and logistics providers.
- Project managers ensure that product launches align with manufacturing and distribution schedules.

Result: Successful global product launches and efficient inventory management.

Amazon

How they integrate PM and SCM:

- Uses project management for warehouse expansion, technology implementation, and delivery projects.
- Manages a highly sophisticated supply chain involving suppliers, fulfillment centers, and transportation networks.
- Uses real-time data to monitor project and supply chain performance.

Result: Fast delivery times and high customer satisfaction.

Tesla

How they integrate PM and SCM:

- Uses project management to build factories and develop new vehicle models.
- Controls much of its supply chain, including battery production and component sourcing.
- Project managers coordinate procurement, manufacturing, and logistics activities.

Result: Faster innovation and greater supply chain visibility.

The Project Life Cycle consists of **Initiation, Planning, Execution, Monitoring and Controlling, and Closing**, which guide a project from conception to completion.

The **Project Life Cycle** is the series of phases that a project goes through from start to finish.

1. Initiation

- Identify the project need or opportunity.
- Define the project's objectives and feasibility.
- Obtain approval to begin the project.

Example: A company decides to implement a new supply chain management system.

2. Planning

- Define the project scope, schedule, budget, and resources.
- Identify risks and develop mitigation plans.
- Create a detailed project management plan.

Example: The company develops a timeline, budget, and implementation strategy for the new system.

3. Execution

- Carry out the project activities according to the plan.
- Coordinate team members and resources.
- Communicate with stakeholders.

Example: The new software is installed, employees are trained, and data is migrated.

4. Monitoring and Controlling

- Track project performance against the plan.
- Manage changes, risks, costs, and quality.
- Take corrective actions when necessary.

Example: The project manager monitors progress, resolves technical issues, and ensures deadlines are met.

5. Closing

- Complete all project activities.
- Obtain customer or stakeholder acceptance.
- Document lessons learned and close contracts.

Example: The system goes live, final reports are prepared, and the project team is released.

- ❑ Supply Chain Projects objectives could vary depending upon scope of the project. Some projects could be undertaken to implement IT systems; some projects could be undertaken to improve efficiency of identified tasks, and some projects could be part of continuous improvement plan or tear down reengineering activity.
- ❑ What ever is the plan, we need methodology to executive the plan.
- ❑ **The project life cycle would include three critical phases,**
 - **The First** one is project initiation; **The Second** phase would be execution and **The Third** and final stage would be control and reengineering phase.
 - The success of the project largely depends upon efficiencies demonstrated in project initiation phase which is pre implementation phase

Project Initiation – Phase 1

- ❑ **The is a critical phase.**

If this phase is not handled efficiently, the success of the project is not assured.

- ❑ During this phase, the project manager may have to understand the scope of the project, mission statement and project deliverables clearly and also ensure that the executive management endorses the project and key deliverables.
- ❑ People come up with very fancy deliverables without understanding the strength of the resources available to execute the project.
- ❑ It is very much essential to make sure that the deliverables and resources are aligned and balanced.

Project Initiation – Phase 1

- ❑ **For example**, the primary objective of the project is to provide end to end supply chain visibility in order to align supply with demand and at the same time management is not willing to invest in IT systems, then there is a **huge gap** between expectations and reality.
- ❑ **The project manager** may have to prove at this point that he/she is not a mere post man delivering what is entrusted to him.
- ❑ The project manager may have to critically audit the project scope and deliverables and ensure that the organization has the required resources to deliver the targeted benefits by executing the project.
- ❑ **If necessary**, the project manager should not hesitate to highlight the threats and weaknesses of the project resources upfront and make a sincere attempt to balance the resources and deliverables and if necessary to stall the project until the anomaly is corrected.

Project Initiation – Phase 1

- ❑ It is also necessary to agree on the project cost and timeline at this stage.
- ❑ In order to complete this activity, the project manager may have to understand the activities involved and estimate the cost and time to be invested in the project.
- ❑ This would act as a base line to compare with the actual performance in order to understand the project management efficiency.

Project Initiation – Phase 1

- ☐ It is time now to create a project team.
- ☐ The project team consists of full-time and part-time resources assigned to work on the project join, help the project leader to achieve the objectives.
- ☐ The Project team could include internal, part time and full time, cross functional and external members.
- ☐ This team could be dynamic, depending upon the requirements of the project few may join, and few may quit the team from time to time.

Project Initiation – Phase 1

- ❑ **The First step** is to align individual key performance indicators of the project team with project objectives.
- ❑ **The Second step** would be to analyse the current challenges, including process mapping and recording the current performance.
- ❑ **This Activity** helps the project team to understand the current process and challenges clearly and at the same the current level of performance is captured to use as a baseline to be used in the review phase of the project.

Project Execution – Phase 2

- ❑ **The Third step** deals with the change management strategy. All projects involve change management.
- ❑ It is essential to have a **change management strategy developed** at the very beginning to address the resistance to the change. “Change management is a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state.” Initially the project manager would act as a Change Agent.
- ❑ As the project progresses, the project manager should identify and develop few more change agents who can help the project manager in influencing the team members resisting the change.

- ❑ **The Fourth step** in the Phase 2 involves developing contingency plan. “A **contingency plan** is a plan devised for a specific situation when things could go wrong.” Some call this as **Plan B**.
- ❑ The objective of this activity is to identify the risks (scope, deliverables, cost implications and timeline) involved and quantify in order to develop the contingency plan accordingly.
- ❑ Basically, this activity is all about thinking in advance using “What If” condition. This would be the last step involving preparatory work. It is the time to walk the talk.

- ❑ **The Fifth step** would deal with developing a solution or managing a solution. As explained earlier, the supply chain project objectives could vary based on project scope.
- ❑ Some project's objective is to implement set of identified solutions, and some could be to improve overall supply chain efficiencies.
- ❑ The role of the project manager is to manage the identified solutions in some projects and develop solutions with the help of project team to improve the efficiency of identified activity.

- ❑ Managing a solution implementation could be a straightforward activity. Whereas developing a solution to improve performance efficiency is quite challenging.
- ❑ **At this stage**, the project manager should have end to end supply chain knowledge and thought leadership.

- ❑ **The Sixth step** which deals with the implementation of the solution is the second part of “walk the talk” activity and developing the solution would be the first part. “Coming together is a beginning. Keeping together is progress.
- ❑ Working together is success. It is the time to work together with all involved to implement the solution successfully. Teamwork is the essence to the success of the project. A typical team could include internal team members, cross functional team members and external team members.
- ❑ The project manager has to manage everyone in the team with dignity to make sure that the project objectives are not compromised. Big or small, every team member is important and has a role to play and that is the very reason that person is part of the team. Hence, the project manager should make sure that he/S handles everyone efficiently.

- ❑ **This phase** is about measuring the efficiency of improvements implemented.
- ❑ This is the evaluation process to assess the success of the project against the baseline data captured at the execution phase and deliverables. If everything goes well as per the plan, this could be the project closure step.
- ❑ The purpose of this activity is to hand over the documentation; improved process flows; deliverables; and results in the dry runs to the key stakeholders and seek permission to close the project.
- ❑ The success of the project is determined by collecting answers to some critical questions **such as:**

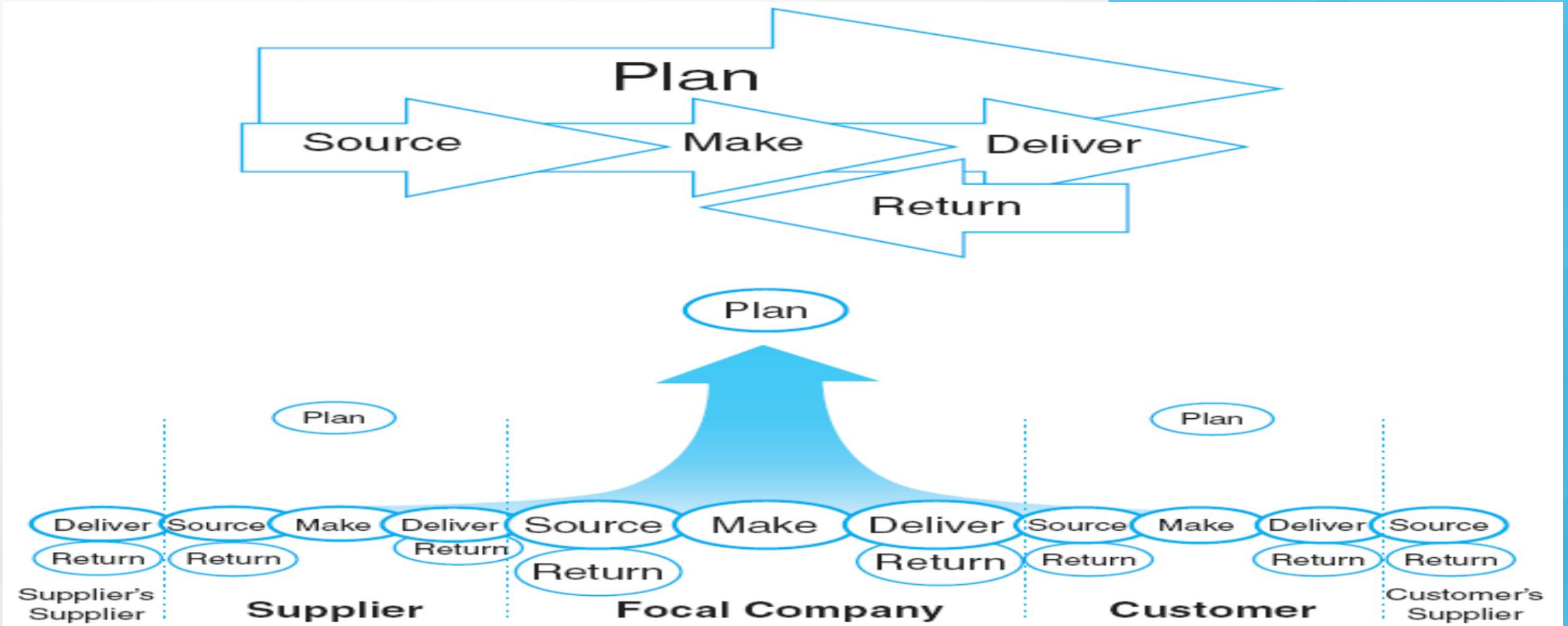
- ☐ Did the project achieve the targeted deliverables?
- ☐ Did the customer/key stake holder agree the proposed changes?
- ☐ Did the project meet the guidelines such as time and cost?
- ☐ Did the project outcome meet the overall quality standards?

The project is not considered as completed unless the answers to the above questions are achieved and they are satisfactory and at the same time the stakeholders agree to close the project.

- ❑ However, business environment is so volatile, sometimes everything may not go according to the plan, or key stakeholders may not be happy with the outcome of the project.
- ❑ There is a need to go into a reengineering process.
- ❑ **Reengineering** is fundamental rethinking achieved, achieve desired improvements in performance. Some call it as “going back to drawing board” and this means start all over again and continues from the **fifth step of the phase two** until desired results are achieved, and stake holders are happy about the outcome.

- ❑ The project scoping should be undertaken very carefully, and the project size should be kept at manageable level.
- ❑ If the scope happens to be big, it would be recommended to break the project into small projects and integrate the same at the end in order to avoid project intimidation. Ultimately, all's well that ends well.

Project Supply Chain Metrics and the Supply Chain Operations Reference (SCOR) Model



Project Supply Chain Metrics and the Supply Chain Operations Reference (SCOR) Model

SCOR Process	Definitions
Plan	Processes that balance aggregate demand and supply to develop a course of action which best meets sourcing, production, and delivery requirements
Source	Processes that procure goods and services to meet planned or actual demand
Make	Processes that transform product to a finished state to meet planned or actual demand
Deliver	Processes that provide finished goods and services to meet planned or actual demand, typically including order management, transportation management, and distribution management
Return	Processes associated with returning or receiving returned products for any reason. These processes extend into post-delivery customer support

Summary of Learning Objectives

- 1-Discuss the meaning of supply chain project management.
- 2-Understand the role of project management in the supply chain optimization.
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- 5-Identify the supply chain project management methodology

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Thank You