Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Advanced planning and scheduling (APS)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Artificial intelligence (AI)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Big data

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Blockchain

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Cloud computing

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Competitive analysis

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Data mining

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Decision support system (DSS)

Computer programs that can learn and reason in a manner similar to humans. The problem is defined in terms of states and operators to generate a search space that is examined for the best solution.

Techniques that deal with the analysis and planning of logistics and manufacturing during short, intermediate, and long-term time periods. Describes any computer program that uses advanced mathematical algorithms or logic to perform optimization or simulation on finite capacity scheduling, sourcing, capital planning, resource planning, forecasting, demand management, and others. These techniques simultaneously consider a range of constraints and business rules to provide real-time planning and scheduling, decision support, available-to-promise, and capable-to-promise capabilities.

A continuously growing list of records, called blocks, which are linked and secured using cryptography. Each block typically contains a cryptographic hash of the previous block, a timestamp, and transaction data. The data in any given block cannot be altered retroactively without the alteration of all subsequent blocks, inherently making it resistant to modification.

Collecting, storing, and processing massive amounts of data for the purpose of converting it into useful information.

An analysis of a competitor that includes its strategies, capabilities, prices, and costs.

An emerging way of computing in which data is stored in massive data centers that can be accessed from any computer connected to the internet.

A computer system designed to assist managers in selecting and evaluating courses of action by providing a logical (usually quantitative) analysis of the relevant factors.

The process of studying data to search for previously unknown relationships. This knowledge is then applied to achieving specific business goals.

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Deflation

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Digital Capabilities Model (DCM) for Supply Networks

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Enterprise resource planning (ERP)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Environmental scanning

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Industry 4.0

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Inflation

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Internet of things (IOT)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Machine learning

A reference model for supply chain professionals to guide the development of digital supply networks. The model is designed in a relational manner to help envision and then build the digitally enabled capabilities required to transform linear supply chains into a set of dynamic networks.

An ongoing decrease in the overall level of prices.

A process used to expose an organization's potential strengths, weaknesses, opportunities, and threats. Many experts emphasize opportunities and threats because the tool is primarily external.

Framework for organizing, defining, and standardizing the business processes necessary to effectively plan and control an organization so the organization can use its internal knowledge to seek external advantages. An ERP system provides extensive databanks of information including master file records, repositories of cost and sales, financial details, analysis of product and customer hierarchies, and historic and current transactional data.

An ongoing rise in the overall level of prices.

A concept of organizational and technological changes along with value chain integrations and new business models development that are driven by customer needs and mass customization requirements and enabled by innovation technologies, connectivity, and information technology integration.

Artificial intelligence software that is capable of analysis, self-training, and observation to improve its own performance. It is often used to assist with planning and forecasting.

An environment in which objects, animals or people are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. This allows objects to be sensed and controlled remotely across existing network infrastructure, creating opportunities for more direct integration between the physical world and computer-based systems.

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Macro environment

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Macroeconomics

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Manufacturing execution systems (MES)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Master data

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
PESTLE analysis

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Portfolio

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Process capability index

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Program

The analysis of the collective behavior of economic actors across an entire economy.

The environment external to a business including technological, economic, natural, and regulatory forces that marketing efforts cannot control.

An enterprise's essential core data consisting of basic information needed across the enterprise to conduct business. Describes the core entities of the enterprise, including products, customers, suppliers, sites, and charts of accounts.

Programs and systems that participate in shop floor control, including programmed logic controllers and process control computers for direct and supervisory control of manufacturing equipment, process information systems that gather historical performance information and then generate reports, graphical displays, and alarms that inform operations personnel what is going on in the plant currently and what occurred during a very short history into the past. Quality control information is also gathered, and a laboratory information management system may be part of this configuration to tie process conditions to the quality data that is generated. Cause-and-effect relationships can thereby be determined. The quality data at times affects the control parameters that are used to meet product specifications either dynamically or offline.

In project management, a collection of projects that are grouped to facilitate management. They are not necessarily interdependent.

An analysis of the political, economic, social/ethical, technological, legislative, and environmental factors in the external environment of an organization that can affect performance. This analysis often is used in conjunction with a SWOT (strengths, weaknesses, opportunities, threats) analysis. It aids organizations in determining the environment in which they operate.

In project management, a coordinated set of related projects, usually including ongoing work.

The value of the tolerance specified for the characteristic divided by the process capability. There are several types, including the widely used Cpk and Cp.

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Project

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Quality function deployment (QFD)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Responsive demand-supply matching (RDSM)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Smart contracts

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Smart operations

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Supply chain control towers

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Supply chain event management (SCEM)

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Voice of the customer (VOC)

A methodology designed to ensure that all the major requirements of the customer are identified and subsequently met or exceeded through the resulting product design process and the design and operation of the supporting production management system.

An endeavor with a specific objective to be met within predetermined time and dollar limitations and that has been assigned for definition or execution.

A self-executing contract with the terms of an agreement between a buyer and a seller written into lines of blockchain code. These contracts use technology to automatically ensure that contract terms are met. If a new action, transaction, or other information is added to the blockchain—or decentralized digital ledger of the agreement—that does not match the terms of the agreement already included in the blockchain, the information will be rejected, thus ensuring that all parties adhere to the contract.

The ability to sense demand exceptions; target revenue opportunities; and resolve supply challenges through planning of constrained resources (material, labor, and equipment capacity) and the allocation of supply across the network to best meet demand aligned with the business strategy.

A centralized hub that provides an integrated, complete view of data across the end-to-end supply chain. The system allows the supplier to see the requirements and inventory levels at the customer's site, enhances the ability to get accurate information about supply location and availability, and highlights any potential excess inventory. Similarly, it helps the customer easily identify supply and demand variations and take necessary actions to return excess inventory.

A highly responsive, adaptive, digitized, and connected function integrated into the digital supply network that synchronizes all aspects of production and operations. This function drives significant performance and safety improvements in production, particularly in regard to quality and maintenance, repair, and overhaul.

Actual customer descriptions in words for the functions and features customers desire for goods and services.

A term associated with supply chain management software applications, in which users have the ability to flag the occurrence of certain supply chain events to trigger some form of alert or action within another supply chain application. SCEM can be deployed to monitor supply chain business processes such as planning, transportation, logistics, or procurement. It can also be applied to supply chain business intelligence applications to alert users to any unplanned or unexpected events.

Module 2
Section A: Select Supply Chain Transformation Drivers

Term
Warehouse management system (WMS)

Module 2
Section B: Assess Supply Chain Current State

Term
Gap

Module 2
Section B: Assess Supply Chain Current State

Term
Gap analysis

Module 2
Section C: Conceptualize the Future-State Supply Chain Operating Model

Term
Brainstorming

Module 2
Section C: Conceptualize the Future-State Supply Chain Operating Model

Term
What-if analysis

Module 2
Section D: Identify Initiatives to Address Gaps

Term
Discretionary dependencies

Module 2
Section D: Identify Initiatives to Address Gaps

Term
Mandatory dependencies

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Break-even analysis

The difference between the actual performance level and the expected performance level.

A computer application system designed to manage and optimize workflows and the storage of goods within a warehouse. It often interfaces with automated data capture and enterprise resource planning systems.

A technique that teams use to generate ideas about a particular subject. Each person on the team is asked to think creatively and write down as many ideas as possible. The ideas are not discussed or reviewed until after the session.

A tool designed to assess the differences between a service that is offered and customer expectations.

Dependencies that are based on best practices; could be done in a different order or in parallel with another project but at higher risk because the best practice is being overridden.

The process of evaluating alternate strategies by answering the consequences of changes to forecasts, manufacturing plans, inventory levels, and so forth.

A study of the number of units or amount of time required to recoup an investment.

Dependencies that are inherent in the nature of the activities or are regulatory or contractual requirements.

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Break-even point

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Contribution margin

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Cost-volume-profit analysis

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Current ratio

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Discounted cash flow

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Economic value added (EVA)

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Net working capital

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Payback period

An amount equal to the difference between sales revenue and variable costs.

The level of production or the volume of sales at which operations are neither profitable nor unprofitable; the intersection of the total revenue and total cost curves.

Current assets divided by current liabilities.

The study of how profits change with various levels of output and selling price.

In managerial accounting, the net operating profit earned above the cost of capital for a profit center.

A method of investment analysis in which future cash flows are converted or discounted to their value at the present time. The net present value of an item is estimated to be the sum of all discounted future cash flows.

The period of time required for the stream of cash flows resulting from a project to equal the project's initial investment.

The current assets of a firm minus its current liabilities.

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Residual income

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Return on investment (ROI)

Module 2
Section F: Develop and Iterate Preliminary Transformation Business Cases

Term
Time value of money

Module 2
Section G: Perform Post-Approval Tasks

Term
Cause-and-effect diagram

Module 2
Section G: Perform Post-Approval Tasks

Term
Fishbone analysis

Module 2
Section G: Perform Post-Approval Tasks

Term
Five whys

Module 2
Section G: Perform Post-Approval Tasks

Term
Gantt chart

Module 2
Section G: Perform Post-Approval Tasks

Term
Nominal group technique

A relative measure of financial performance that provides a means for comparing various investments by calculating the profits returned during a specified time period.

The net operating income that an investment center earns above the minimum required return on its operating assets.

A tool for analyzing process dispersion. It is also referred to as the Ishikawa diagram (because Kaoru Ishikawa developed it) and the fishbone diagram (because the complete diagram resembles a fish skeleton). The diagram illustrates the main causes and sub-causes leading to an effect (symptom).

The cumulative effect of elapsed time on the money value of an event, based on the earning power of equivalent invested funds.

A common practice in total quality management that involves asking “why” five times when confronted with a problem. By the time the answer to the fifth why is found, the ultimate cause of the problem is identified.

A technique to organize the elements of a problem or situation to aid in the determination of the causes of the problem or situation. The analysis relates the effect of the environment to the several possible sources of the problem.

A technique, similar to brainstorming, used by teams to generate ideas about a particular subject. Team members are asked to silently come up with as many ideas as possible and write them down. Each member is then asked to share one idea, which is recorded. After all the ideas are recorded, they are discussed and prioritized by the group.

The earliest and best-known type of planning and control chart. It is especially designed to show graphically the relationship between planned performance and actual performance over time. Used for (1) machine loading, in which one horizontal line is used to represent capacity and another to represent load against that capacity, or (2) monitoring job progress, in which one horizontal line represents the production schedule and another parallel line represents the actual progress of the job against the schedule in time.