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ENGLISH COMMUNICATION IN LOGISTICS MANAGEMENT

By Lefki Papacharalambous

Levels 1 & 2

Welcome Note

Dear Student

Your journey in the world of Logistics science has just begun!

The aim of this academic workbook is to introduce you in the science of Logistics in the English language and help you familiarize with current notions, ideas and concepts in procurement management in the academic and business contexts of work.

While attending this course you will be given the chance to develop your communication and presentation skills both in written and oral formats. You will work progressively to develop and communicate your own products of knowledge doing research and producing outcomes in both individual and team contexts.

By the end of your English course in Logistics you will be able to use confidently specialized terms of the Logistics science in your own speeches and essays. You will also be able to analyze business results and defend your own views in a professional manner. Finally, you will strengthen your professional profile in terms of your communication and leadership skills.

Welcome Aboard!



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UNIT 1

Business Planning Fundamentals

A plan - a statement of intent - a calculated intention to organize effort and resource to achieve an outcome - in this context a plan is in written form, comprising explanation, justification and relevant numerical and financial statistical data. In a business context a plan's numerical data - costs and revenues - are normally scheduled over at least one trading year, broken down weekly, monthly quarterly and cumulatively.

A business - an activity or entity, irrespective of size and autonomy, which is engaged in an activity, normally the provision of products and/or services, to produce commercial gain, extending to non-commercial organizations whose aim may or may not be profit (hence why public service sector schools and hospitals are in this context referred to as 'businesses').

Business plan - this is now rightly a very general and flexible term, applicable to **the planned activities and aims of any entity, individual group or organization where effort is being converted into results**, for example: a small company; a large company; a corner shop; a local window-cleaning business; a regional business; a multi-million pound multi-national corporation; a charity; a school; a hospital; a local council; a government agency or department; a joint-venture; a project within a business or department; a business unit, division, or department within another organization or company, a profit centre or cost centre within an organization or business; the responsibility of a team or group or an individual. The business entity could also be a proposed start-up, a new business development within an existing organization, a new joint-venture, or any new organizational or business project which aims to convert action into results. The extent to which a business plan includes costs and overheads activities and resources (eg., production, research and development, warehouse, storage, transport, distribution, wastage, shrinkage, head office, training, bad debts, etc) depends on the needs of the business and the purpose of the plan. Large 'executive-level' business plans therefore look rather like a 'predictive profit and loss account', fully itemised down to the 'bottom line'. Business plans written at business unit or departmental level do not generally include financial data outside the department concerned. Most business plans are in effect sales plans or marketing plans or departmental plans, which form the main bias of this guide.

Strategy - originally a military term, in a business planning context strategy/strategic means/pertains to **why and how the plan will work**, in relation to all factors of influence upon the business entity and activity, particularly including competitors (thus the use of a military combative term), customers and demographics, technology and communications.

Marketing - believed by many to mean the same as advertising or sales promotion, marketing actually means and covers everything from company culture and positioning, through market research, new business/product development, advertising and promotion, PR (public/press relations), and arguably all of the sales functions as well. Marketing is **the process by which a business decides what it will sell, to whom, when and how, and then does it**.

Marketing plan - logically a plan which details what a business will sell, to whom, when and how, implicitly including the business/marketing strategy. The extent to which financial and commercial numerical data is included depends on the needs of the business. The extent to which this details the sales plan also depends on the needs of the business.

Sales - the transactions between the business and its customers whereby services and/or products are provided in return for payment. Sales (sales department/sales team) also describes the activities and resources that enable this process, and sales also describes the revenues that the business derives from the sales activities.

Sales plan - a plan describing, quantifying and phased over time, how the the sales will be made and to whom. Some organizations interpret this to be the same as a business plan or a marketing plan.

Business strategy - see 'strategy' - it's the same.

Marketing strategy - see 'strategy' - it's the same.

Service contract - a formal document usually drawn up by the supplier by which the trading arrangement is agreed with the customer.

Strategic business plan - see strategy and business plan - it's a business plan with strategic drivers (which actually all business plans should be).

Strategic business planning - developing and writing a strategic business plan.

Philosophy, values, ethics, vision - these are the fundamentals of business planning, and determine the spirit and integrity of the business or organization.

As you can see that many of these terms are interchangeable, so it's important to clarify what needs to be planned for rather than assuming or inferring a meaning from the name given to the task. That said, the principles explained here can be applied to business plans of all sorts. Business plans are often called different names - especially by senior managers and directors delegating a planning exercise that they do not understand well enough to explain. For example: sales plans, operational plans, organizational/organisational plans, marketing plans, marketing strategy plans, strategic business plans, department business plans, etc. Typically these names reflect the department doing the planning, despite which, the planning process and content required in the document is broadly similar.

Rules for writing a business or operating plan

A useful first rule of business planning is to **decide what you are actually trying to achieve and always keep this in mind**. Write your aim large as a constant reminder to yourself, and to anyone else involved. Keeping your central aim visible will help you minimise the distractions and distortions which frequently arise during the planning process.

An increasingly vital and perhaps second rule of business planning is to establish a **strong ethical philosophy** at the outset of your planning. This provides a vital reference for decision-making and strategy from the start. A strong clear ethical code communicates your values to staff, customers,

suppliers, and creates a simple consistent basis for operations which conventional financials, processes, systems and even people, do not address. It is very difficult to introduce ethical principles later into an enterprise, especially when planning shifts into implementation, and more so if problems arise relating to integrity, honesty, corporate responsibility, trust, governance, etc., any of which can have massive impact on relationships and reputation.

It is easy to address issues of ethics and corporate responsibility when you are the owner of a new enterprise. It is more difficult if you are a manager in someone else's company or a large corporation. Nevertheless ethics and corporate responsibility are highly significant in planning, and strong justification for their proper consideration can now be made. There are now plenty of recent examples of corporations - indeed entire national economies and governments - which have failed because of poor regard to ethical considerations. The world is changing and learning, slowly, but it is, and anyone ignoring ethics in planning today does so at their own peril.

A third crucial requirement for business plans is **return on investment**, or for public services and non-profit organisations: **effective use of investment and resources**, which is beyond simple 'cost control'.

For the vast majority of organisations, whether companies, public services, not-for-profit trusts and charities, **all organisations need to be financially effective in what they do, otherwise they will cease to function.**

Ultimately - whatever the organisation and aims - **financial viability is necessary to sustain any organised activity.**

While it's essential to **manage ethical and socially responsible aspects of organisational aims**, these must allow for **adequate return on investment** (or in less traditional and 'non-profit' enterprises, must allow for the **effective use of investment and resources**, according to the financial requirements of the particular organisation).

Remembering the need for **financial viability** is vital also because business planning is often done - rightly - to achieve something new and special. This tends to focus thinking on creativity, innovation, ambition, quality, excellence, perhaps even social good, etc., which can easily distract planning away from the basic need to be financially viable - and crucially not to make a loss. By treating **return on investment** as a vital requirement of planning we increase the likelihood that plans will be viable and therefore sustainable.

Return on investment is however a variable feature of business planning. It is flexible according to the type of enterprise, its main purpose and philosophy.

In a conventional profit-driven corporation **return on investment** (at an optimal rate) is typically a strong strategic driver for local planning and decisions, and by implication also a basic requirement of the enterprise as a whole. On the other hand, in a business or organization less focused on shareholder reward, such as a public services trust or charity, or a social enterprise or cooperative, **return on investment** (at a relatively lower rate), may be a requirement simply to sustain viable operations, according to the aims of the enterprise. In the first example, **return on investment** is the aim; in the second example, **return on investment** enables some other higher aim to be achieved. In more detail:

In a traditional profit-driven corporation, **return on investment** tends to be the main requirement of any business plan and also the main aim or purpose or driver of the plan. In most traditional corporations **return on investment** tends to be at the heart of all activities, since typically the corporation exists to maximize the yield (profit and growth effectively) of shareholder funds invested in the business. Planning in traditional corporations at times forgets this basic obligation, especially when a junior manager is asked to 'write a business plan' for the first time.

In traditional profit-driven corporations, when a new manager starts to write a business plan or operational plan for the first time (and for some experienced managers also, for the umpteenth time), the manager wonders: What is the aim? What am I trying to achieve? Often when they ask their own manager, the manager has the same doubts. The central aim is usually **return on investment**.

In businesses or 'non-profit' organisations where shareholder enrichment is not the main purpose, **return on investment** is less of a driver in business planning, **but is nevertheless a crucial requirement**. Such enterprises are becoming more popular, and will continue to become so, since the collapse of the western economies in 2008, and increasing disillusionment with old-style business thinking. Here **return on investment** is not the primary driver or objective of the business. Instead the main driver of enterprise may be some other purpose.

An example of 'some other purpose' might be the activities of a social enterprise or cooperative, or maybe an employee ownership company, or perhaps a trust or charity, whose main aim is (rather than the traditional profit generation for external/institutional shareholders) perhaps to benefit its members/staff, and/or to sustain local jobs, and/or to benefit the local community, or maybe to advance science or learning or health, etc. Here, while **return on investment** may seem less crucial or appropriate to planning and operations, **the enterprise must nevertheless remain financially viable**, or it ceases to be able to operate at all.

In such examples, **return on investment** in business planning is not usually maximized, but must still be treated as an underpinning requirement to planning, and flexed according to the fundamental aims and financial requirements of the enterprise.

Before planning, therefore, it is helpful to understand clearly:

1. What are we actually aiming to achieve?
2. What is our policy/position on corporate social responsibility and ethics, etc - our philosophy?
3. And what **return on investment** (or alternative financial performance) does our activity/enterprise require - is this a strategic driver in itself, or simply the means by which we maintain our activities in support of our (point 1) aims?

Planning - Cause and Effect

The basic methodology of business planning is identifying **causes and effects**, according to your relevant business requirements (financials and ethics) and strategic drivers (what we are actually aiming to achieve).

Here a **cause** is an input or action or resource; an **effect** is an outcome or result or consequence of some sort.

We want to achieve xyz **effect** (for example a given return on investment, or a certain sales level or market share, whatever) - so what should we plan to **cause** this to happen?

Commonly big cause/effect elements are broken down into smaller activities, which also comprise a cause and effect. (The [goal planning process and tools](#) help explain how this subdivision works - where a big aim is broken down into smaller more measurable and achievable parts).

Junior managers have responsibility for plans and activities which feed into larger departmental plans and activities of senior managers. The plans and activities of senior managers feed into the divisional plans of executives and directors. There is a hierarchy or tree structure of cause and effects, all hopefully contributing to the overall organizational aim.

In many good businesses a substantial business planning responsibility extends now to front line customer-facing staff, and the trend is increasing. In this context, the business plan could be called also be called a marketing plan, or a sales plan - all departmental plans are basically types of business planning:

"What you are going to sell to whom, when and how you are going to sell it, how much contribution (gross profit) the sales will produce, what the marketing and/or selling cost will be, and what will be the return on investment."

Where a department is a 'cost centre' not a 'profit-centre' - providing products or services internally to other departments rather than externally to customers - then the language and planning elements may alter, but the principles remain the same.

Also, these principles and methods apply to very large complex multinational organizations, which tend to entail more and different costs, fixed overheads, revenues, and consequently larger planning formats; more and bigger spreadsheets, more lines and columns on each, more attention and people working on the numbers, more accountants, and typically - especially at middle-management level and above - more emphasis on cashflow and the balance sheet, alongside basic 'profit and loss' planning.

Market Research : Primary Research vs Secondary Research

'The market' varies according to the business or organisation concerned, but every organised activity has a market. Knowing the market enables you to assess and value and plan how to engage with it. A common failing of business planning or operational planning outside of the 'business' world, is to plan in isolation, looking inward, when ideas can seem very positive and reliable because there's no context and nothing to compare. Hence research is critical. And this applies to any type of organisation - not just to businesses. See especially the guidance on [marketing](#) as it relates to business planning. Planning very much concerns processes.

Your market research should focus on the information you need, to help you to formulate strategy and make business decisions. Market research should be pragmatic and purposeful - a means to an end,

and not a means in itself. Market information potentially covers a vast range of data, from global macro-trends and statistics, to very specific and detailed local or technical information, so it's important to decide what is actually relevant and necessary to know. Market information about market and industry trends, values, main corporations, market structure, etc, is important to know for large corporations operating on a national or international basis. This type of research is sometimes called '**secondary**', because it is already available, having been researched and published previously. This sort of information is available from the internet, libraries, research companies, trade and national press and publications, professional associations and institutes. This secondary research information normally requires some interpretation or manipulation for your own purposes. However there's no point spending days researching global statistical economic and demographic data if you are developing a strategy for a relatively small or local business. Far more useful would be to carry out your own 'primary' research (i.e. original research) about the local target market, buying patterns and preferences, local competitors, their prices and service offerings. A lot of useful primary market research can be performed using customer feed-back, surveys, questionnaires and focus groups (obtaining indicators and views through discussion among a few representative people in a controlled discussion situation). This sort of primary research should be tailored exactly for your needs. Primary research requires less manipulation than secondary research, but all types of research need a certain amount of analysis. Be careful when extrapolating or projecting figures to avoid magnifying initial mistakes or wrong assumptions. If the starting point is inaccurate the resulting analysis will not be reliable. For businesses of any size; small, local, global and everything in between, the main elements you need to understand and quantify are:

- customer (and potential customer) numbers, profile and mix
- customer perceptions, needs, preferences, buying patterns, and trends, by sub-sector if necessary
- products and services, mix, values and trends
- demographic issues and trends (especially if dependent on consumer markets)
- future regulatory and legal effects
- prices and values, and customer perceptions in these areas
- distribution and routes to market
- competitor activities, strengths, weaknesses, products, services, prices, sales methods, etc

Primary research is recommended for local and niche services. Keep the subjects simple and the range narrow. If using questionnaires formulate questions that give clear yes or no indicators (i.e. avoid three and five options in multi-choices which produce lots of uncertain answers) always understand how you will analyse and measure the data produced. Try to convert data to numerical format and manipulate on a spreadsheet. Use focus groups for more detailed work. For large research projects consider using a market research organization because they'll probably do it better than you, even though this is likely to be more costly. If you use any sort of marketing agency ensure you issue a clear brief, and that your aims are clearly understood. Useful frameworks for research are [PEST analysis](#) and [SWOT analysis](#).

UNIT 2

Supply Chain Management

What is Supply Chain Management?

Supply Chain Management, as defined by the world famous, Institute of Supply Management Inc., USA, is the design and management of seamless , value added process across organizational boundaries to meet the real needs of the end customer.

Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities.

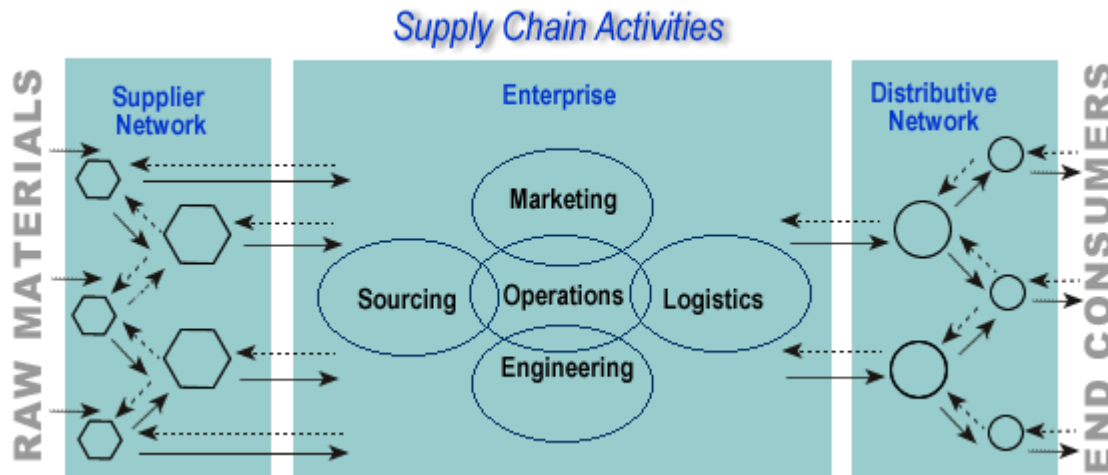
Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers.

In essence, supply chain management integrates supply and demand management within and across companies. Supply Chain Management is an integrating function with primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model.

It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology.

The development and integration of people and technological resources are critical to successful supply chain integration. As the corporations strive to focus on core competencies and become more flexible, they have reduced their ownership of raw materials sources. These functions are increasingly being outsourced to other corporations that can perform the activities better or more cost effectively. The effect has been to increase the number of companies involved in satisfying consumer demand while reducing the management control on daily logistics operations. Less control and more supply chain partners led to the creation of Supply Chain management concepts. The purpose of Supply chain management is to improve trust and collaboration among supply chain partners, thus improving inventory visibility and improving inventory velocity.

Thus the answer to the question " What is Supply Chain Management ? " can be as **Supply Chain Management** is the process of planning , implementing and controlling the operations of the supply chain with the purpose of satisfying the customer's requirement as efficiently as possible. Supply Chain spans all movement and storage of raw materials , Work-in-process , inventory and finished goods from the point of origin to the point of consumption.



According to the CSCMP, a professional association, that developed the definition, **Supply Chain Management** encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. It also includes coordination and collaboration with channel partners which can be suppliers, **intermediaries**, **third party** etc. **Supply Chain management must address the following problems:**

Distribution Network Configuration: Number and location of suppliers, production facilities, distribution centers, warehouses and customers

Distribution strategy: Centralized Vs decentralized, cross docking, direct shipment, pull or push strategies, third party logistics

Information: Integrate systems and processes through the supply chain to share valuable information, including demand signals, forecasts, inventory and transportation

Inventory management: Quantity and location of inventory including raw material, work-in-process and finished goods service providers and customers.

Thus **Supply chain management (SCM)** can also be described as the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. Supply chain management involves coordinating and integrating these flows both within and among companies.

It is said that the ultimate goal of any effective supply chain management system is to reduce inventory (with the assumption that products are available when needed). As a solution for successful supply chain management, sophisticated software systems with Web interfaces are competing with Web-based application service providers (ASP) who promise to provide part or all of the SCM service for companies who rent their service.

Is Supply Chain Management an Extended Enterprise?

Supply chain management flows can be divided into three main flows:

- **The product flow**
- **The information flow**
- **The finances flow**

The product flow includes the movement of goods from a supplier to a customer, as well as any customer returns or service needs. The information flow involves transmitting orders and updating the status of delivery. The financial flow consists of credit terms, payment schedules, and consignment and title ownership arrangements.

In essence, **Supply chain management** [integrates](#) supply and demand management within and across companies. Some experts distinguish Supply Chain Management with [Logistics](#) while others consider the term to be interchangeable.

From the point of view of an enterprise, the scope of supply chain management is usually bounded on the supply side to the supplier's supplier and on the customer side by your customer's customer.

Origin of Supply Chain Management - a journey into the future of scm

A business entity ,in the earlier 1950s revolved more around its own self . Merger and acquisitions though prevalent ,a firm used to engage its resources for all the activities needed from buying raw materials to manufacturing and then distributing the products to stockists, dealers and retailers. The aim was to produce more, reduce cost ,sell more and increase profit ,all by oneself. Creating partnerships with upstream or floor to sustain mass production was considered necessary.

Need for effective Materials management was duly recognized. The advancement in Information Technology, witnessing application of complicated softwares for tracking and managing inventories through LAN and WAN became competitive factors. Concepts such as JIT and TQM helped the processing on the shop floor. The origin of supply chain management can be traced to 80s. The 80s, saw a dramatic change in the business scenario all over the world due to globalization and liberalization.

Low cost, high quality product and customer delight became the buzz words for the industry. Increased dependence on JIT and TQM methodologies created the vision for strategic partnerships.

Development in IT further reduced the national boundary concepts. The first mention of the term supply chain management was found in a paper published in 1982 in the US. Market globalization also presented a great opportunity to reach out to high potential global markets. This needed relook of the way inventory and logistics were being done.

The challenges associated with enhancement in quality, manufacturing efficiency, customer service and new product design and development also increased.

To deal with these challenges, manufacturers began buying from a select number of certified, high quality suppliers with excellent service reputations and involved these suppliers in their new product design and development activities as well as in cost, quality and service improvement initiatives.

Obviously, supplier management and customer management became focused activities for a firm and Supply Chain Management became popular as a source of competitive advantage for the firms.

Today, Supply Chain Management has concretized for itself into: the purchasing and supply management emphasis from industrial buyers and the transportation and logistics emphasis from the wholesalers and the retailers. The new well talked about concepts are supply chain spanning from the supplier's supplier on the one hand to the customer's customer on the other hand.

In the future, it is expected that supply chain management emphasis will concentrate on supply chain expansion, increasing supply chain responsiveness and further reducing supply chain costs.

Concept of Supply Chain Management- *a real understanding of what scm is*

- **The first thing one needs to understand** is that SCM doesn't replace what we've learned about management over the last 50 years; it builds upon it. The analogy that a chain is only as strong as its weakest link holds here as well. Thus the Supply Chain concept remains the same. Organizations must first be able to provide quality products or services in a timely, cost-effective manner if they want to tackle broader supply chain issues.

Therefore, programs such as Total Quality Management, Just-in-Time manufacturing, concurrent product development, and the like are just as relevant today as they were in the past. In fact, it's interesting to note that many of the firms that have emerged as SCM leaders had already established their reputations in other areas beforehand.

The second thing to understand about SCM is that it often requires significant changes in the firm's organizational structure. SCM issues cut across functional areas and even business entities. Therefore, the responsibility and authority for implementing SCM must be placed at the highest levels of an organization.

Firms that attempt to imbed SCM within a functional unit (such as purchasing, operations, or logistics) usually have limited success.

Third, SCM requires firms to put in place information systems and metrics that focus on performance across the entire supply chain.

This is because individual units that seek to maximize their performance without regard to the broader impact on the supply chain can cause problems. For example, **a manufacturing unit's decision to** minimize its inventory levels may reduce delivery performance to the end user.

Likewise, a distributor's decision to chase highly seasonal demand may "bullwhip" its upstream partners, causing significant cost overruns. Putting in place the information systems and metrics needed to make intelligent decisions in the face of such trade-offs presents a significant challenge to supply chain partners.

The organizations that make up the supply chain are "linked" together through physical flows and information flows. Physical flows involve the transformation, movement, and storage of goods and materials. They are the most visible piece of the supply chain. But just as important are information flows. Information flows allow the various supply chain partners to coordinate their long-term plans, and to control the day-to-day flow of goods and material up and down the supply chain.

Finally, SCM adds another layer of complexity to a firm's strategy development efforts. Years ago, firms could succeed by being particularly good in one functional area, such as marketing, finance, or **operations**. **Then firms recognized that** they had to have sufficient capabilities across multiple functional areas in order to survive. Nowadays, much competition occurs between multi-firm supply chains, not just between individual firms.

In addition to their debates about functional- and business-level strategies, then, managers must now address how they will partner with other firms in order to compete.

Some experts distinguish Supply Chain Management with Logistics while others consider the term to be interchangeable. From the point of view of an enterprise, the scope of supply chain management is usually bounded on the supply side to the supplier's supplier and on the customer side by your customer's customer.

Supply chain management concept is as much a philosophical approach as it is a body of tools and techniques, and typically requires a great deal of interaction and trust between companies to work.

For right now, however, let's talk about three major developments that have brought SCM to the forefront of management's attention:

- The information revolution
- Increased competition and globalization
- Relationship management

Principles of Supply Chain Management - *building foundation for long term advantage*

Successful Supply Chain Management is a complex proposition. Within a broad supply chain management there can be a number of small supply chains which need to be managed. Each chain is unique for the given player.

The stake for the different players is extremely high making it imperative for the partners - including suppliers, manufacturers, distributors and customers behave as if they are part of the same company. This way only they can enhance performance significantly across the chain. Having as the main concern a win win situation for all the partners involved in the chain leads us to recognise and adhere to the following **principles of Supply Chain Management** :

Customer is the king : Your operations are meaningless if you don't meet their requirements. In a chain , your customer may be the supplier to some other customer. As such its requirement may be a certain quantity of material to be delivered in a particular time period. Thus begin with the customer.

Management of Logistics : It requires great planning and impeccable execution across the whole chain. It involves determination of locations for distribution, management of inventory, transportation etc besides laying down clear performance measurement criteria for maintaining the standard of services.

Customer Management : This needs to be properly organized so that the customer gets the desired service. It may require aligning all the supply chains under your command so that their combined output meets the specific demand of the customer.

Process integration : It is the most vital part, the fulcrum on which success of the whole Supply chain exercise rests.

For its success it requires real time information sharing among the chain partners and planning together for aspects such as forecasts etc. across the chain.

Leveraging of Manufacturing and Sourcing : It is not possible for the firms , even in a supply chain environment to manufacture in-house, everything that is required across the chain. Instead, outsourcing, lean manufacturing, Just in time (JIT) etc need to be followed.

All these need proper linking with each other to produce the desired effect.

Strategic alliances and relationship management : Every chain partner shall look from its own perspective in a supply chain leading to strategic alliances across the chain. Once formed these partnerships need to be developed through effective relationship management

Develop performance measures : Performance measure are basically development of standards of performance and method for their measurement across the chain so that suitable action can be initiated to see that the performance of the entire chain remains optimum.

To sum it up the principles of supply chain management revolves around customer and chain's efficiency in satisfying the customer.

Definitions of Supply Chain Management - a clear scm concept clears the vision

Supply Chain Management is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. What is Supply Chain Management then ?

The definition of Supply Chain Management is based on two core ideas :

The first is that practically every product that reaches an end user represents the **cumulative effort of multiple organizations**. These organizations are referred to collectively as the supply chain.

The second idea is that while supply chains have existed for a long time, most organizations have only paid attention to what was happening within their “four walls.” Few businesses understood, much less managed, the entire chain of activities that ultimately delivered products to the final customer. The result was disjointed and often ineffective supply chains.

"Supply chain management, then, is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. It represents a conscious effort by the supply chain firms to develop and run supply chains in the most effective & efficient ways possible". Supply chain activities cover everything from product development, sourcing, production, and logistics, as well as the information systems needed to coordinate these activities.

The Institute for Supply Management describes supply chain management as "the design and management of seamless, value added processes across organizational boundaries to meet the real needs of the end customer. The development and integration of people and technological resources are critical to successful supply chain integration".

Supply Chain Management is the process of planning, implementing and controlling the operations of the supply chain with the purpose of satisfying the customer's requirement as efficiently as possible. Supply Chain spans all movement and storage of raw materials, Work-in-process , inventory and finished goods from the point of origin to the point of consumption.

According to the CSCMP , a professional association, that developed the definition, "**Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion and all logistics management activities. It also includes coordination and collaboration with channel partners which can be suppliers , intermediaries , third party service providers and customers. In essence, Supply chain management integrates supply and demand management within and across companies.**"

The Supply Chain Council defines it as "**managing supply and demand, sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, and delivery to the customer**".

The council of Logistics Management defines supply chain management as "**the systemic, strategic coordination, of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain for the purpose of improving long-term performance of the individual companies and the supply chain as a whole**"

Importance of Supply Chain Management - scm, a set of critically important functions

When we talk about the **importance of Supply chain management** we try to bring into sharp focus the loss due to the absence of an effective supply chain strategy and / or the benefit due to a well oiled supply chain for any firm. Basically, it is a question of how good is the integration of supply chain that matters for any firm.

Of critical importance in today's business scenario is managing competition through partners.

An independent firm on its own may not have all the resources to match its competitors. But by having an upstream and a downstream arrangement of getting the input , processing it into output and then pushing it to the downstream for distribution with effective chain partners it can face any business challenges.

Importance of having a robust Supply Chain Management can be understood by an example:

ABC manufactures the cycle chains for a cycle manufacturing company XYZ. Another company PQR manufactures bits used in the cycle chain manufactured by ABC.

In coming days ,as per the market forecast, XYZ shall be needing 50,000 units of cycle chain ,an information that is not available with ABC.

Accordingly, PQR also does not know how many bits to produce in order to meet ABC's requirement. The result would be either both ABC and PQR hold high safety stock inventory or lose business respectively with XYZ and ABC.

Now, if in this example showing only three supply chain partners , absence of a critical information among the partners, that is of production forecast at XYZ firm results into either a higher inventory level or loss of future business what would happen if the supply chain consisted of a large number of partners, a scenario normally existing for medium to large sized companies ,the world over ?

In an era of gaining competitive advantage through reduced inventories all over ,a company is going to have terrible disadvantage of having to carry unnecessary inventory for the fear of losing future business.

The **importance of Supply Chain Management** thus is in :

- * Reduced inventories along the chain
- * Better information sharing among the partners
- * Planning being done in consultation rather than in isolation

The benefits too would be reflected in terms of :

- Lower costs
- Better customer service
- Efficient manufacturing
- Better trust among the partners leading to win-win

Process integration and other efforts result in improved quality as higher profit margins shall get reflected in creation of better facilities for manufacturing, product design research, enhanced customer service.

UNIT 3

Project Management

Large or complex projects in big organizations often require some sort of executive 'sponsorship' or leadership. This is commonly termed 'project sponsorship'.

While project management skills are obviously important for project managers, interestingly **the methods and tools that project managers use can be helpful for everyone.**

A 'task' does not necessarily have to be called a 'project' in order for project management methods to be very useful in its planning and implementation. Even the smallest task can benefit from the use of a well-chosen project management technique or tool, especially in the planning stage.

Any task that requires some preparation to achieve a successful outcome, will probably be done better by using a few project management methods somewhere in the process. Project management methods can help in the planning and managing of all sorts of tasks, especially complex activities.

Project management is chiefly associated with planning and managing change in an organization, but a project can also be something unrelated to business - even a domestic situation, such as moving house, or planning a wedding.

Project management methods and tools can therefore be useful far more widely than people assume.

Project management techniques and [project planning tools](#) are useful for any tasks in which different outcomes are possible - where risks of problems and failures exist - and so require planning and assessing options, and organizing activities and resources to deliver a successful result.

Projects can be various shapes and sizes, from the small and straightforward to extremely large and highly complex.

In organizations and businesses, project management can be concerned with anything, particularly introducing or changing things, in any area or function, for example:

- people, staffing and management
- products and services
- materials, manufacturing and production
- IT and communications

- plant, vehicles, equipment
- storage, distribution, logistics
- buildings and premises
- finance, administration, acquisition and divestment
- purchasing
- sales, selling, marketing
- human resources development and training
- customer service and relations
- quality, health and safety,
- legal and professional
- technical, scientific, research and development
- new business development
- and anything else which needs planning and managing within organizations.

Successful project management, for projects large or small, tends to follow the process outlined below.

The same principles, used selectively and appropriately, also apply to smaller tasks.

Project management techniques are not just for project managers - they are available for anyone to use.

Project management process

1. [Agree precise specification for the project](#) - 'Terms of Reference'
2. [Plan the project](#) - time, team, activities, resources, financials - using suitable [project management tools](#).
3. [Communicate the project plan to your project team](#) - and to any other interested people and groups.
4. [Agree and delegate project actions](#).
5. [Manage and motivate](#) - inform, encourage, enable the project team.
6. [Check, measure, monitor, review project progress](#) - adjust project plans, and inform the project team and others.

7. [Complete project](#) - review and report on project performance; give praise and thanks to the project team.
8. [Project follow-up](#) - train, support, measure and report results and benefits.

1 - Agree precise specification (terms of reference) for the project

Often called the project 'terms of reference', the project specification should be an accurate description of what the project aims to achieve, and the criteria and flexibilities involved, its parameters, scope, range, outputs, sources, participants, budgets and timescales (beware - see note below about planning timescales).

Typically and prior to the project's formal establishment the project 'terms of reference' are produced or at least drafted at a fundamental level by a ['project sponsor', or 'executive in charge'](#) (of the project). Often such an initial top-level general project description (a 'business case' basically) is required for the project to be justified, approved, and funded at a corporate level, prior to the commencement of detailed project planning. The project manager, typically appointed by the 'project sponsor' or the 'executive in charge', may be involved to varying degrees in the drafting of the initial corporate project description or business case. It is not unusual for a project manager to first be unofficially appointed to the project management role, pending corporate approval of the project itself and the formal appointment of the project manager. The project sponsor is usually a more senior manager or executive than the project manager, although not necessarily the 'boss' or senior up-line manager to which the project manager normally reports. All substantial projects generally require a formal and senior 'project sponsor' or 'executive in charge', although minor projects forming part of a manager's conventional duties, and not requiring specific board or corporate approval, may not require a 'project sponsor' as such, in which case executive accountability for the project and the project manager belongs to the normal up-line reporting manager/executive.

Usually the project manager must consult with others (especially the project sponsor) and then agree the detailed project specification with superiors and/or relevant authorities. The specification may involve several drafts before it is agreed. A project specification is essential in that it creates a measurable accountability for anyone wishing at any time to assess how the project is going, or its success on completion. Project terms of reference also provide an essential discipline and framework to keep the project on track, and concerned with the original agreed aims and parameters. A properly formulated and agreed project specification also protects the project manager from being held to account for issues that are outside the original scope of the project or beyond the project manager's control.

This is the stage to agree special conditions or exceptions with those in authority. Once you've published the terms of reference you have created a very firm set of expectations by which you will be judged. So if you have any concerns, or want to renegotiate, now's the time to do it.

The largest projects can require several weeks to produce and agree project terms of reference. Most normal business projects however require a few days thinking and consulting to produce a suitable project specification. Establishing and agreeing a project specification is an important process even if your task is simple one.

A template for a project specification:

1. Describe purpose, aims and deliverables.
2. State parameters (timescales, budgets, range, scope, territory, authority).
3. State people involved and the way the team will work (frequency of meetings, decision-making process).
4. Establish 'break-points' at which to review and check progress, and how progress and results will be measured.

Separately the acronym [BOSCARDET](#) provides a useful example structure for Terms of Reference headings/sections: Background, Objectives, Scope, Constraints, Assumptions, Reporting, Dependencies, Estimates, Timescales. This structure contains no specific heading for costs/budgets - these considerations can be included within 'Constraints' or 'Estimates'.

Since projects (and other activities requiring Terms of Reference) vary considerably there is no standard universal structure for a Terms of Reference document. The responsibility lies with the project manager or leader to ensure all relevant and necessary issues are included, and this local interpretation tends to imply TOR headings and document structure. [Brainstorming](#) can be a helpful process by which all relevant Terms of Reference criteria can be identified and structured.

2 - Plan the project

Plan the various stages and activities of the project. Where possible (and certainly where necessary) involve your team in the planning. A useful tip is to work backwards from the end aim, identifying all the things that need to be put in place and done, in reverse order. Additionally, from the bare beginnings of the project, use [brainstorming](#) (noting ideas and points at random - typically with a project team), to help gather points and issues and to explore innovations and ideas. [Fishbone diagrams](#) are also useful for brainstorming and

identifying causal factors which might otherwise be forgotten. For complex projects, or when you lack experience of the issues, involve others in the brainstorming process. Thereafter it's a question of putting the issues in the right order, and establishing relationships and links between each issue. Complex projects will have a number of activities running in parallel. Some parts of the project will need other parts of the project to be completed before they can begin or progress. Such 'interdependent' parts of a project need particularly careful consideration and planning. Some projects will require a feasibility stage before the completion of a detailed plan. [Gantt Charts](#) and [Critical Path Analysis Flow Diagrams](#) are two commonly used tools for detailed project management planning, enabling scheduling, costing and budgeting and other financials, and project management and reporting. See also [project sponsorship](#) to understand how project sponsorship may be integrated with the project manager's responsibilities for planning.

Project Timescales and Costs

Most projects come in late - that's just the way it is - so don't plan a timescale that is over-ambitious; ideally plan for some slippage. If you have been given a fixed deadline, plan to meet it earlier, and work back from that earlier date. Build some slippage or leeway into each phase of the project. Err on the side of caution where you can. Projects which slip back and are delivered late, or which run over budget or fail to meet other financial requirements often cause significant problems. Many planners are put under pressure to deliver projects sooner and more cost-effectively than is realistic. Ambition and aiming high are good attitudes, but planning without proper prudence and responsibility is daft. Investors and executives tend rarely to question an over-ambitious plan, but they will quickly make very ruthless decisions when any overly ambitious project starts to fail. Exercising a little realism at the outset of a project regarding financials and timescales can save an enormous amount of trouble later.

The project team

Another important part of the planning stage is picking your team. Take great care, especially if you have team-members imposed on you by the project brief. Selecting and gaining commitment from the best team members - whether directly employed, freelance, contractors, suppliers, consultants or other partners - is crucial to the quality of the project, and the ease with which you are able to manage it. Generally try to establish your team as soon as possible. Identifying or appointing one or two people even during the terms of reference stage is possible sometimes. Appointing the team early maximises their ownership and buy-in to the project, and maximises what they can contribute. But be very wary of appointing people before you are sure how good they are, and not until they have

committed themselves to the project upon terms that are clearly understood and acceptable. Don't imagine that teams need to be full of paid and official project team members. Some of the most valuable team members are informal advisors, mentors, helpers, who want nothing other than to be involved and a few words of thanks. Project management on a tight budget can be a lonely business - get some help from good people you can trust, whatever the budget.

To plan and manage large complex projects with various parallel and dependent activities you will need to put together a 'Critical Path Analysis' and a spreadsheet on MS Excel or equivalent. Critical Path Analysis will show you the order in which tasks must be performed, and the relative importance of tasks. Some tasks can appear small and insignificant when they might actually be hugely influential in enabling much bigger activities to proceed or give best results. A Gantt chart is a useful way of showing blocks of activities over time and at a given cost and for managing the project and its costs along the way.

Various project management software is available, much of which is useful, but before trying it you should understand and concentrate on developing the pure project management skills, which are described in this process. The best software in the world will not help you if you can't do the basic things.

Project management tools

Here are examples and explanations of four commonly used tools in project planning and project management, namely: Brainstorming, Fishbone Diagrams, Critical Path Analysis Flow Diagrams, and Gantt Charts. Additionally and separately see [business process modelling](#) and [quality management](#), which contain related tools and methods aside from the main project management models shown below.

The tools here each have their strengths and particular purposes, summarised as a basic guide in the matrix below.

	B	F	C	G
Project brainstorming and initial concepts, ideas, structures, aims, etc	***	**		
Gathering and identifying all elements, especially causal and hidden factors	*	***	**	
Scheduling and timescales			**	***
Identifying and sequencing parallel and interdependent activities and stages	*		***	*
Financials - costings, budgets, revenues, profits, variances, etc	*	*	**	***
Monitoring, forecasting, reporting		*	**	***
Troubleshooting, problem identification, diagnosis and solutions	**	***	**	*
'Snapshot' or 'map' overview - non-sequential, non-scheduled	**	***		
Format for communications, presentations, updates, progress reports, etc		*	*	***

Matrix key:

B = [Brainstorming](#)

F = [Fishbone/Ishikawa Diagrams](#)

C = [Critical Path Analysis Flow Diagrams](#)

G = [Gantt Charts](#)

*** - main tool

** - optional/secondary tool

* - sometimes useful

Brainstorming

Brainstorming is usually the first crucial creative stage of the project management and project planning process. See the [brainstorming method](#) in detail and explained separately, because it many other useful applications outside of project management.

Unlike most project management skills and methods, the first stages of the brainstorming process is ideally a free-thinking and random technique. Consequently it can be overlooked or under-utilized because it not a natural approach for many people whose mains strengths are in systems and processes. Consequently this stage of the project planning process can benefit from being facilitated by a team member able to manage such a session, specifically to help very organised people to think randomly and creatively.

Fishbone diagrams

Fishbone diagrams are chiefly used in quality management fault-detection, and in business process improvement, especially in manufacturing and production, but the model is also very useful in project management planning and task management generally.

Within project management fishbone diagrams are useful for early planning, notably when gathering and organising factors, for example during brainstorming.

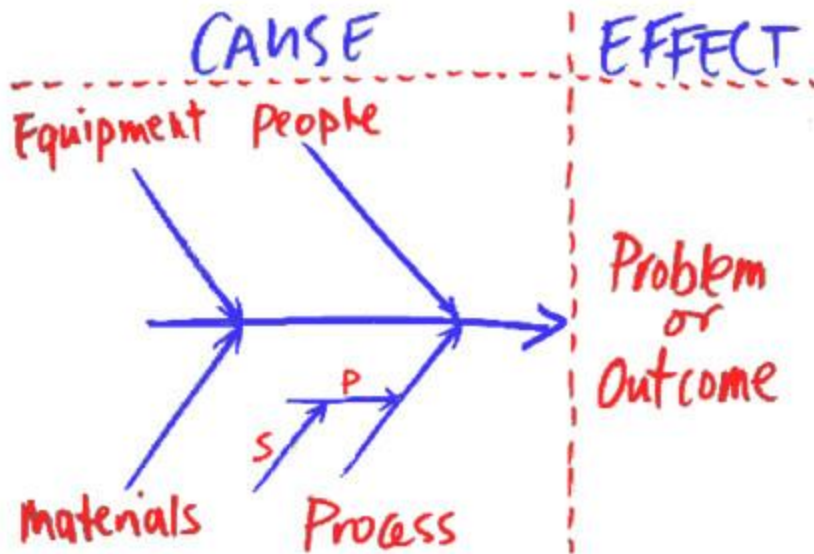
Fishbone diagrams are very good for identifying hidden factors which can be significant in enabling larger activities, resources areas, or parts of a process.

Fishbone diagrams are not good for scheduling or showing interdependent time-critical factors.

Fishbone diagrams are also called 'cause and effect diagrams' and Ishikawa diagrams, after Kaoru Ishikawa (1915-89), a Japanese professor specialising in industrial quality management and engineering who devised the technique in the 1960s.

Ishikawa's diagram became known as a fishbone diagram, obviously, because it looks like a fishbone:





A fishbone diagram has a central spine running left to right, around which is built a map of factors which contribute to the final result (or problem).

For each project the main categories of factors are identified and shown as the main 'bones' leading to the spine.

Into each category can be drawn 'primary' elements or factors (shown as P in the diagram), and into these can be drawn secondary elements or factors (shown as S). This is done for every category, and can be extended to third or fourth level factors if necessary.

The diagram above is a very simple one. Typically fishbone diagrams have six or more main bones feeding into the spine. Other main category factors can include Environment, Management, Systems, Training, Legal, etc.

The categories used in a fishbone diagram should be whatever makes sense for the project. Various standard category sets exist for different industrial applications, however it is important that your chosen structure is right for your own situation, rather than taking a standard set of category headings and hoping that it fits.

At a simple level the fishbone diagram is a very effective planning model and tool - especially for 'mapping' an entire operation.

Where a fishbone diagram is used for project planning of course the 'Effect' is shown as an aim or outcome or result, not a problem.

The 'Problem' term is used in fault diagnosis and in quality management problem-solving. Some fishbone diagrams can become very complex indeed, which is common in specialised quality management areas, especially where systems are computerised.

This model, and the critical path analysis diagram are similar to the even more complex diagrams used on [business process modelling](#) within areas of business planning and and business process improvement.

Project Critical Path Analysis (flow diagram or chart)

'Critical Path Analysis' sounds very complicated, but it's a very logical and effective method for planning and managing complex projects. A critical path analysis is normally shown as a flow diagram, whose format is linear (organised in a line), and specifically a time-line.

Critical Path Analysis is also called Critical Path Method - it's the same thing - and the terms are commonly abbreviated, to CPA and CPM.

A commonly used tool within Critical Path Analysis is:

PERT (Program/Programme/Project Evaluation and Review Technique)

which is a specialised method for identifying related and interdependent activities and events, especially where a big project may contain hundreds or thousands of connected elements. PERT is not normally relevant in simple projects, but any project of considerable size and complexity, particularly when timings and interdependency issues are crucial, can benefit from the detailed analysis enabled by PERT methods. PERT analysis commonly feeds into Critical Path Analysis and to other broader project management systems, such as those mentioned here.

Critical Path Analysis flow diagrams are very good for showing interdependent factors whose timings overlap or coincide. They also enable a plan to be scheduled according to a timescale. Critical Path Analysis flow diagrams also enable costings and budgeting, although not quite as easily as Gantt charts (below), and they also help planners to identify causal elements, although not quite so easily as fishbone diagrams (below).

This is how to create a Critical Path Analysis. As an example, the project is a simple one - making a fried breakfast.

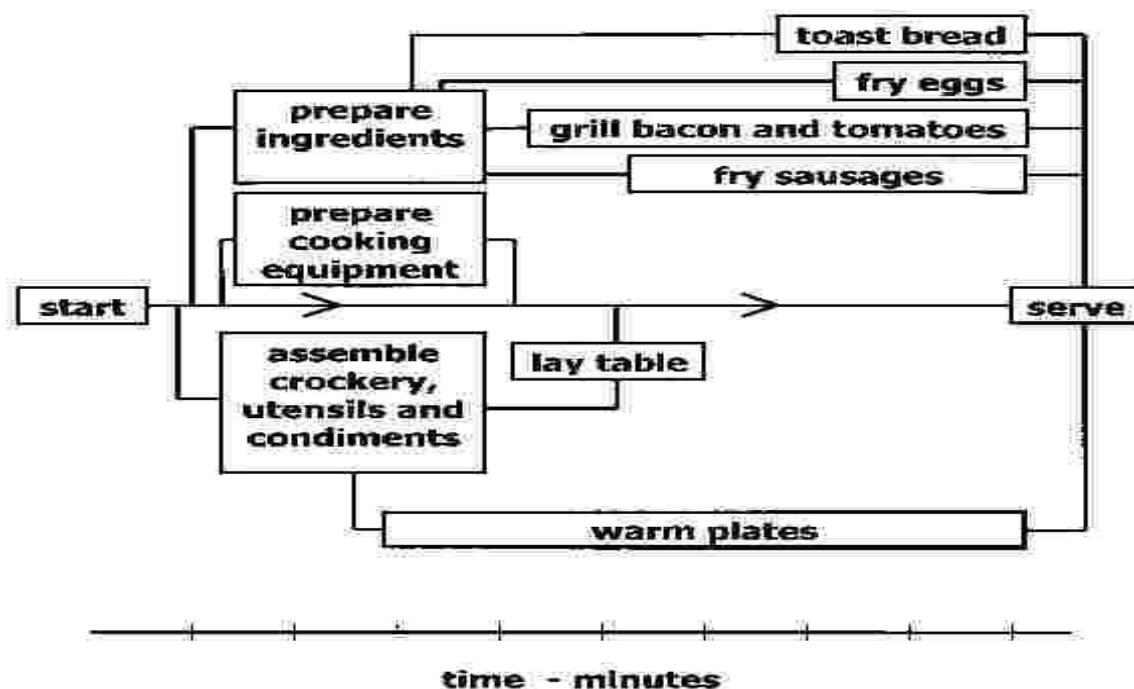
First note down all the issues (resources and activities in a rough order), again for example:

Assemble crockery and utensils, assemble ingredients, prepare equipment, make toast, fry sausages and eggs, grill bacon and tomatoes, lay table, warm plates, serve.

Some of these activities must happen in parallel - and crucially they are interdependent. That is to say, if you tried to make a fried breakfast by doing one task at a time, and one after the other, things would go wrong. Certain tasks must be started before others, and certain tasks must be completed in order for others to begin. The plates need to be warming while other activities are going on. The toast needs to be toasting while the sausages are frying, and at the same time the bacon and sausages are under the grill. The eggs need to be fried last. A Critical Path Analysis is a diagrammatical representation of what needs done and when. Timescales and costs can be applied to each activity and resource. Here's the Critical Path Analysis for making a fried breakfast:

This Critical Path Analysis example below shows just a few activities over a few minutes. Normal business projects would see the analysis extending several times wider than this example, and the time line would be based on weeks or months. It is possible to use MS Excel or a similar spreadsheet to create a Critical Path Analysis, which allows financial totals and time totals to be planned and tracked. Various specialised project management software enable the same thing.

Project critical path analysis flow diagram example



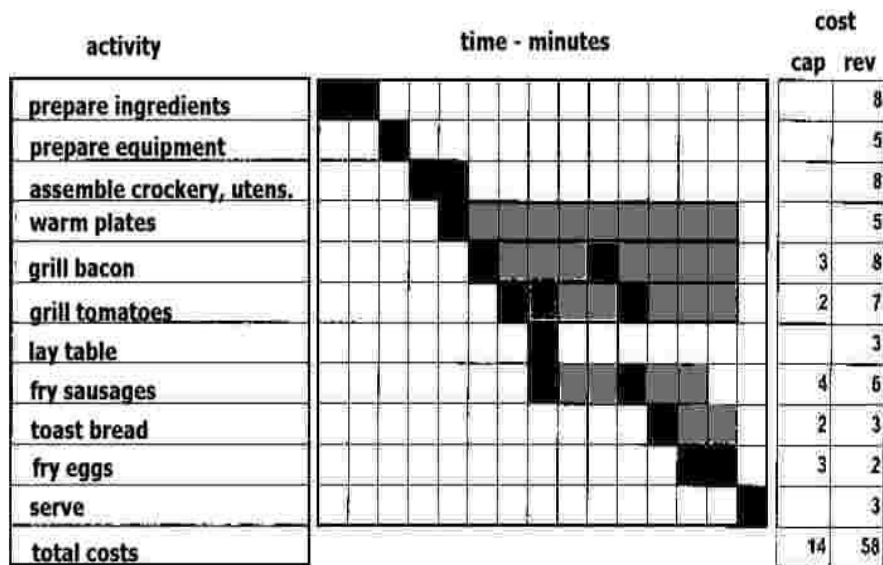
Gantt charts

Gantt Charts (commonly wrongly called gant charts) are extremely useful project management tools. The Gantt Chart is named after US engineer and consultant Henry Gantt (1861-1919) who devised the technique in the 1910s.

Gantt charts are excellent models for scheduling and for budgeting, and for reporting and presenting and communicating project plans and progress easily and quickly, but as a rule Gantt Charts are not as good as a Critical Path Analysis Flow Diagram for identifying and showing interdependent factors, or for 'mapping' a plan from and/or into all of its detailed causal or contributing elements.

You can construct a Gantt Chart using MSExcel or a similar spreadsheet. Every activity has a separate line. Create a time-line for the duration of the project (the breakfast example shows minutes, but normally you would use weeks, or for very big long-term projects, months). You can colour code the time blocks to denote type of activity (for example, intense, watching brief, directly managed, delegated and left-to-run, etc.) You can schedule review and insert break points. At the end of each line you can show as many cost columns for the activities as you need. The breakfast example shows just the capital cost of the consumable items and a revenue cost for labour and fuel. A Gantt chart like this can be used to keep track of progress for each activity and how the costs are running. You can move the time blocks around to report on actuals versus planned, and to re-schedule, and to create new plan updates. Costs columns can show plan and actuals and variances, and calculate whatever totals, averages, ratios, etc., that you need. Gantt Charts are probably the most flexible and useful of all project management tools, but remember they do not very easily or obviously show the importance and inter-dependence of related parallel activities, and they won't obviously show the necessity to complete one task before another can begin, as a Critical Path Analysis will do, so you may need both tools, especially at the planning stage, and almost certainly for large complex projects.

Gantt chart example



Project planning tools naturally become used also for subsequent project reporting, presentations, etc., and you will make life easier for everyone if you use formats that people recognize and find familiar.

A wide range of computerised systems/software now exists for project management and planning, and new methods continue to be developed. It is an area of high innovation, with lots of scope for improvement and development.

Project Financial Planning and Reporting

For projects involving more than petty cash you'll probably need a spreadsheet to plan and report planned and actual expenditure. Use MSExcel or similar. Financial accounting for small projects can sometimes be managed using the project's Gantt Chart. Large projects are likely to require some sort of require dedicated accounting system, although conceivably Gantt Charts and financial management accounts can easily be administered within a spreadsheet system given sufficient expertise. If you don't know how to put together a basic financial plan, get some help from someone who does, and make sure you bring a good friendly, flexible financial person into your team - it's a key function of project management, and if you can't manage the financial processes your self you need to be able to rely completely on whoever does it for you. The spreadsheet must enable you to plan,

administer and report the detailed finances of your project. Create a cost line for main expenditure activity, and break this down into individual elements. Create a system for allocating incoming invoices to the correct activities (your bought-ledger people won't know unless you tell them), and showing when the costs hit the project account. Establish clear payment terms with all suppliers and stick to them. Projects develop problems when team members get dissatisfied; rest assured, non- or late-payment is a primary cause of dissatisfaction.

Remember to set some budget aside for 'contingencies' - you will almost certainly need it.

Project Contingency Planning

Planning for and anticipating the unforeseen, or the possibility that things may not go as expected, is called 'contingency planning'. Contingency planning is vital in any task when results and outcomes cannot be absolutely guaranteed. Often a contingency budget needs to be planned as there are usually costs associated. Contingency planning is about preparing fall-back actions, and making sure that leeway for time, activity and resource exists to rectify or replace first-choice plans. A simple contingency plan for the fried breakfast would be to plan for the possibility of breaking the yolk of an egg, in which case spare resource (eggs) should be budgeted for and available if needed. Another might be to prepare some hash-browns and mushrooms in the event that any of the diners are vegetarian. It may be difficult to anticipate precisely what contingency to plan for in complex long-term projects, in which case simply a contingency budget is provided, to be allocated later when and if required.

3 - Communicate the project plan to your team

This serves two purposes: it informs people what's happening, and it obtains essential support, agreement and commitment. If your project is complex and involves a team, then you should involve the team in the planning process to maximise buy-in, ownership, and thereby accountability. Your project will also benefit from input and consultation from relevant people at an early stage.

Also consider how best to communicate the aims and approach of your project to others in your organization and wider network.

Your project 'team' can extend more widely than you might first imagine. Consider all the possible 'stakeholders' - those who have an interest in your project and the areas it touches and needs to attract support or tolerance.

Involvement and communication are vital for cooperation and support. Failing to communicate to people (who might have no great input, but whose cooperation is crucial) is a common reason for arousing suspicion and objections, defensiveness or resistance.

See also [project sponsorship](#), for details of how that role may be involved communicating to the wider environment and stakeholders.

4 - Agree and delegate project actions

Your plan will have identified those responsible for each activity. Activities need to be very clearly described, including all relevant parameters, timescales, costs, and deliverables. Use the [SMART acronym](#) to help you delegate tasks properly. See the [delegation tips and processes](#). Using proper delegation methods is vital for successful project management involving teams. When delegated tasks fail this is typically because they have not been explained clearly, agreed with the other person, or supported and checked while in progress. So publish the full plan to all in the team, and consider carefully how to delegate medium-to-long-term tasks in light of team members' forward-planning capabilities. Long-term complex projects need to be planned in more detail, and great care must be taken in delegating and supporting them. Only delegate tasks which pass the SMART test. Other useful materials to help understand team delegation are the [Tannenbaum and Schmidt Continuum](#), and [Tuckman's group forming/performing model](#). The [Johari Window](#) model is also an excellent review framework for quickly checking or reminding about mutual awareness among team members in large complex projects, where there is often a risk of project fragmentation and people 'doing their own thing' in blissful isolation - which seriously undermines even the best planned projects.

5 - Manage, motivate, inform, encourage, enable the project team

Manage the team and activities in [meetings](#), communicating, supporting, and helping with decisions (but not making them for people who can make them for themselves). 'Praise loudly; blame softly.' (a wonderful maxim attributed to Catherine the Great). One of the big challenges for a project manager is deciding how much freedom to give for each delegated activity. Tight parameters and lots of checking are necessary for inexperienced people who like clear instructions, but this approach is the kiss of death to experienced, entrepreneurial and creative people. They need a wider brief, more freedom, and less checking. Manage these people by the results they get - not how they get them. Look out for differences in [personality and working styles](#) in your team. Misunderstanding personal styles can get in the way of team cooperation. Your role here is to enable and translate. Face to face meetings, when you can bring team members together, are generally the best way to avoid

issues and relationships becoming personalised and emotional. Communicate progress and successes regularly to everyone. Give the people in your team the plaudits, particularly when someone high up expresses satisfaction - never, never accept plaudits yourself. Conversely - you must take the blame for anything that goes wrong - never 'dump' (your problems or stresses) on anyone in your team. As project manager any problem is always ultimately down to you anyway. Use [empathy and conflict handling techniques](#), and look out for signs of [stress](#) and manage it accordingly. A happy positive team with a basic plan will outperform a miserable team with a brilliant plan, every time.

6 - Check, measure, and review project performance; adjust project plans; inform project team and others

Check the progress of activities against the plan. Review performance regularly and at the stipulated review points, and confirm the validity and relevance of the remainder of the plan. Adjust the plan if necessary in light of performance, changing circumstances, and new information, but remain on track and within the original terms of reference. Be sure to use transparent, pre-agreed measurements when judging performance. (Which shows how essential it is to have these measures in place and clearly agreed before the task begins.) Identify, agree and delegate new actions as appropriate. Inform team members and those in authority about developments, clearly, concisely and in writing. Plan team review meetings. Stick to the monitoring systems you established. Probe the apparent situations to get at the real facts and figures. Analyse causes and learn from mistakes. Identify reliable advisors and experts in the team and use them. Keep talking to people, and make yourself available to all.

See also [project sponsorship](#), to appreciate the higher-level responsibilities for monitoring and reporting of a project's progress, status, implications, etc.

7 - Complete project; review and report on project; give praise and thanks to the project team

At the end of your successful project hold a review with the team. Ensure you understand what happened and why. Reflect on any failures and mistakes positively, objectively, and without allocating personal blame. Reflect on successes gratefully and realistically. Write a review report, and make observations and recommendations about follow up issues and priorities - there will be plenty.

Where a [project sponsor](#) is involved it is reasonable for this role to be responsible for top-level reporting/review, and where applicable recognizing and rewarding the successful project manager and team too.

8 - Follow up - train, support, measure and report project results and benefits

Traditionally this stage would be considered part of the project completion, but increasingly an emphasised additional stage of project follow-up is appropriate.

This is particularly so in very political environments, and/or where projects benefits have relatively low visibility and meaning to stakeholders (staff, customers, investors, etc), especially if the project also has very high costs, as ICT projects tend to do.

ICT (information and communications technology) projects often are like this - low visibility of benefits but very high costs, and also very high stress and risk levels too.

Project management almost always involves [change management](#) too, within which it's very important to consider the effects of the project on people who have to adapt to the change. There is often a [training](#) or education need. There will almost certainly be an explanation need, in which for example methods like [team briefing](#) have prove very useful.

 **As project manager, to be at the end of a project and to report that the project plan has been fully met, on time and on budget, is a significant achievement, whatever the project size and complexity. The mix of skills required are such that good project managers can manage anything.**

UNIT 4 Building your Professional Profile

What information should a CV include?

- **Personal details.** Most CVs start with these but take care to avoid superfluous details, such as religious affiliation, children's names and so on.
- **Education and qualifications.** Take care to include the names of institutions and dates attended in reverse order; university before school results.
- **Work experience.** The most widely accepted style of employment record is the chronological CV. Career history is presented in reverse date order starting with most recent. Achievements and responsibilities are listed against each role. More emphasis/information should be put on more recent jobs.
- **Skills.** Include computer skills and (genuine) foreign language skills and any other recent training/development that is relevant to the role applied for.
- **Hobbies and Interests.** Keep this section short.
- **Referees.** These can simply be 'Available on request'.

How long should a CV be?

A good curriculum vitae should ideally cover no more than two pages and never more than three. Aim to ensure the content is clear, structured, concise and relevant. Using bullet points rather than full sentences can help minimise word usage.

[Curriculum Vitae Tips](#)

More tips and advice for writing a perfect curriculum vitae, plus CV tips for online job applications, CV formatting and styles, academic and international CVs, and tips for writing curriculum vitae that secure an interview.

[CV Examples](#)

Before you start work on your curriculum vitae, review free cv samples that fit a variety of employment situations. These curriculum vitae examples and templates provide job seekers with examples of cv formats that will work for almost every job seeker.

Curriculum Vitae Format

Your Contact Information

Name
Address
Telephone
Cell Phone
Email

Personal Information

Date of Birth
Place of Birth
Citizenship
Visa Status
Gender

Optional Personal Information

Marital Status
Spouse's Name
Children

Employment History

List in chronological order, include position details and dates

Work History
Academic Positions
Research and Training

Education

Include dates, majors, and details of degrees, training and certification

High School
University
Graduate School
Post-Doctoral Training

Professional Qualifications

Certifications and Accreditations
Computer Skills

Awards

Publications

Books

Professional Memberships

Interests

Job Interview

Can You Correctly Answer Tough Job Interview Questions Like These?

- **Tell me about yourself**
- **Why did you leave your last job?**
Give an answer that **reveals your strengths.**
- **Do you know anything about our company?**
Show THAT you did your homework.
- **What did you like about your last job?**
Show that you were on top of things about your previous job.
- **What would you like to be doing five years from now?**
A well spoken answer shows how you make good use of goals and are perfect for the job.
- **Can you work under pressure?**

More questions:

- **Could you describe a difficult problem and how you dealt with it?**
- **Why do you want to work here?**
- **What were some of the things you did not like about your last job?**
- **What do you consider your most significant weaknesses?**
- **What are your biggest accomplishments?**
- **How do you accept criticism?**
- **What is the most difficult situation you have faced?**
- **What are some of the things that bother you?**
- **What do you consider your most significant strengths?**
- **Do you prefer working with others or alone?**
- **How do you get along with different types of people?**
- **Can you give me an example of a project that didn't work out well?**
- **What are some of the things you and your supervisor have disagreed on?**

APPENDIX 1

Glossary of Logistic Terms

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3PL

Describes businesses that provide one or many of a variety of logistics-related services. Types of services may include public warehousing, contract warehousing, transportation management, distribution management, freight consolidation.

A 3PL provider may take over all receiving, storage, value added, shipping, and transportation responsibilities for a client and conduct them in the 3PL's warehouse using the 3PL's equipment and employees, or may manage one or all of these functions in the client's facility using the client's equipment, or any combination of the above.

Another term, 4PL, is sometimes used to describe businesses that manage a variety of logistics related services for clients by using 3PLs.

ABC, ABC Classification

A strategy for classifying inventory or parts within a warehouse or system. Typically fastest movers are categorized as A items, though classification can be based on other factors as well such as margin.

Accessorial

A supplemental activity or material, outside normal handling and storage, that is billable in accordance with the clients contract.

Accessorial Charge

The amount charged to the client for providing accessorial service or materials.

Airbag

An inflatable bag used to fill empty space on a load of product to keep the product from shifting.

Allocated Inventory

Inventory that is reserved for a specific order, customer, promotional event or other purpose and is not to be used for standard order fulfillment purposes. Once allocated, this stock is no longer available as usable inventory for new orders.

Allocation

Inventory is allocated to a specific order.

Anniversary Billing

A method of billing where the client is billed for one month of storage once inventory is received. If this product remains in inventory, it will be billed an additional monthly charge each month on the anniversary of its arrival.

Annual Inventory

Physical count of all product in the warehouse done on a yearly basis.

Apron

The area outside the dock door which is used by delivery vehicles to park or position for loading and unloading.

Assembly Area

Location in the warehouse where products and loads are collected and combined.

Available Inventory

The amount of shippable product in the warehouse; does not include product designated as damaged, on hold, or pending shipment.

Bar Code

A UPC code that identifies product. It consists of a series of black bars and is scannable. The bar code represents an identification number that is stored in the computer system along with other information about the product.

Back Haul

When an outbound shipment is delivered, instead of coming back empty, a load is picked up from a destination close to the final stop-off and then delivered either back to the warehouse or a Consignee location near the warehouse. A Back Haul creates revenue as opposed to coming back empty which would be an expense.

Banding

A type of plastic or metal strapping that helps support a load and hold it together. Can be used to strap and secure product on a pallet or skid.

Batch picking

A picking method whereby one SKU is picked one time for all applicable orders and then distributed across multiple orders in a staging or packing location.

Bay

An area in the warehouse designated by markings on the columns or floor.

Bay Storage

Use of the bay for storage.

Beginning Inventory

Inventory level and count at the beginning of a period.

Bill of Lading

The Bill of Lading (BOL) is an official document that accompanies every shipment. It serves as the contract between the party that owns the freight and the carrier. The each driver prior to vehicle departure. When a driver for an outside carrier signs the Bill of Lading, he/she accepts responsibility for the shipment. Upon arrival at the destination, the consignee or customer signs the Bill of Lading to indicate that the shipment was received and all goods are present as itemized. This customer-signed Bill of Lading then serves as a Proof of Delivery (POD) document.

Bin

A four-sided structure that is mounted on a pallet. A bin may or may not have a cover. Or, an area in the warehouse used for storage of inventory that is being staged or at rest.

Blind counts

Blind counts are used during physical inventories to prevent counter bias. The location and item code are provided to the counter, but the counter must provide the quantity of the item found in the given locaiton without knowledge of the desired quantity according to the WMS (Warehouse Management System) or inventory records.

Bonded Warehouse

A bonded warehouse is one that has been approved by the U.S. Treasury Department who, due to observance of revenue laws, has put the warehouse under bond or guarantee. A bonded warehouse can also be a warehouse utilized for the storage of merchandise that is on hold until duty is paid.

Bottleneck

Traffic or congestion in an area of the warehouse due to poor planning or insufficient resources.

Bubble Wrap

Sheet of plastic with air bubbles that is used as a packing material.

Bulkhead

A movable railcar partition that is used to secure a load.

Bulk Storage

Storage of large quantities of product in shipping containers. May also be the storage of product that is not packed (loose).

Carousel

Material Handling Equipment designed to bring product to picker so that the picker can remain stationed in a designated picking location without traveling. Ideally, order information is loaded or automatically transferred into the carousel system, and multiple orders are picked by multiple pickers at one time. Types of carousels include horizontal and vertical.

Carrier

The carrier transports goods from the client to Nexus and from Nexus to the consignee. The carrier can be Nexus (Nexus owned truck), a transportation company, or the railroad. Responsibilities include carrying the goods safely, in good condition and in a timely manner.

Carton

A unit of product, a protective casing around a product.

Chassis

A frame with wheels that supports a container that is being transported over land.

Chock

To use a wood or metal wedge to block the wheels of a truck while it is being loaded or unloaded.

Clamp

An attachment to a forklift that allows it to encircle and grasp product.

Clear Height

The height pallets can be stacked while leaving clearance for product movement or for lights, sprinklers, etc., hanging from a ceiling.

Client

The stock that arrives at our Distribution Centers is owned by the client, the companies that have made arrangements with Nexus to store and distribute their products.

Commodity

Product identified with specific clients (i.e. paper).

Concealed Damage

Damage to product that is not obvious until the product is examined or the condition becomes apparent during storage or transfer.

Consignee

The client's customers are referred to as the consignee. Just think of the consignee as the "end user" or the company where the logistics company ships the stock.

Consignment inventory

Inventory that is in the possession of the customer, but is still owned by the supplier. Consignment inventory is used as a marketing tool to make it easier for a customer to stock a specific supplier's inventory.

Consolidate

Combine two or more shipments going in the same direction or to the same destination on a single trailer.

Container

A container is a box that is used to transport product, and is widely used for international shipments. Marine containers or intermodal containers can travel on ocean liners, railroads, and on truck frames (chassis).

Contract

A binding agreement between Nexus and a client stating terms of the agreement, storage fees, transportation rates, and accessorial charges.

Contract warehouse.

A warehouse operation managed by a third party logistics (3PL) provider for a specified period of time. The 3PL manages a client's inventory and order fulfillment processes. Pricing scenarios may vary, and storage, labor and equipment resources are typically dedicated to the client for the duration of the contract. The client may or may not share in the building and equipment expense.

Cross-dock

Product or orders that are brought into the warehouse but not put-away. Instead of the stock arriving and being placed into storage, the stock is temporarily stored at the dock to be delivered or goes out immediately on another vehicle to be shipped. This stock is usually shipped immediately or within a day and does not go into storage.

Cross-Training

Allowing employees to have experience in multiple tasks, job functions, or across multiple accounts in order to increase productivity and provide backup.

Cube Utilization

Space utilized versus space available.

Customer Pick-up

Load that is picked up at the warehouse by the customer (usually within the same day the order is placed).

Cycle Counting

The physical counting of portions of inventory on an on-going basis. After a period of time all products have been counted. A cycle is then defined as the time it takes to count all inventory once.

Date Code

A label that shows when a product was manufactured.

DC

Abbreviation for Distribution Center. A warehouse that manages and distributes inventory per the direction of corporate systems and customer demand.

Dead Stock

Product that has been in inventory for an extended period of time without being moved or ordered.

Deep-Lane Storage

Product is stored more than one unit deep in an aisle.

Distribution Center

Nexus Distribution Centers are warehouse facilities that store, manage, and ship inventory on behalf of its clients. Inbound carriers bring product into the Distribution Center. Product can be immediately allocated to existing orders, or it can be placed into storage for the purpose of filling future orders. Outbound carriers transport stock from the Distribution Center to the end user. Nexus Distribution Centers are strategically placed close to major transportation lanes (i.e. highways, railroads). Nexus relies on outside carriers as well its own fleet of trucks to transport product.

Dock

A warehouse door with an extending platform where trailers are loaded and unloaded.

Dock Face

Outer wall of dock door.

Dock Leveler

A plate at the dock door entrance that raised and lowered either manually or hydraulically to accommodate trailer floor heights.

Dock Light

A light used to illuminate the inside of a trailer in order to aid in the loading and unloading processes.

Dock Plate

A moveable metal plate that is placed between the warehouse dock door and a trailer or railcar and makes it easier/smoothen to access a trailer or railcar with a forklift or similar equipment.

Double-Deep Storage Lane

Method of storing product two loads deep in an aisle.

Drayage

A container or piggyback is moved from a rail yard to another location (which is most likely a Nexus Distribution Center) and then returning that piggyback / container back to the initial pick-up point, is known as a dray. It is important that these containers get unloaded quickly and returned back to the original point so not to incur detention charges.

Drive-In Rack

Storage racking equipment that has side rails to enable warehouse operators to stack product high in deep rows. It provides access only from aisles.

Drive-Through Rack

Storage racking equipment with side rails to enable warehouse operators to stack product high in deep rows. Unlike Drive-In Rack, Drive-Through Rack allows access from either end of the row, as opposed to only being accessible from the aisle.

Dunnage

Refers to packing materials such as cardboard, empty pallets, air bags, air pillows, packing peanuts, or other materials utilized to protect freight.

EDI (Electronic Data Interchange)

Electronic Data Interchange refers to a computerized exchange of information with the client through the warehouse management system. It is a method of exchanging orders, invoices, shipping forms and other documents over the computer.

By eliminating the clerical, mailing and other costs associated with paper-based information, EDI reduces costs, time delays and errors.

Emergency Order

Also known as an expedited order, this order is placed and processed to be picked and shipped in an expedited manner.

Ending Inventory

Inventory levels at the end of a specified period.

ERP (Enterprise Resource Planning)

Refers to a wide range of activities supported by software with multiple modules (accounting, purchasing, inventory, manufacturing, etc.). Manufacturers and other businesses utilize ERP systems to manage various aspects of their businesses, including: product planning, parts purchasing, inventory management, supplier management, customer service management, and order tracking. A relational database system may be a necessary component for the effective use of an ERP system. Implementation of an ERP system can involve considerable business process analysis, user training, and a significant financial investment.

ESFR (Early Suppression, Fast Response)

Ceiling-mounted sprinkler systems that started being used in warehouses around 1990 as an alternative to rack-mounted sprinkler systems. ESFR heads detect fire faster and are reported to start spraying with more speed than conventional sprinkler heads. They also output water at higher volumes (approximately 100 gallons per minute). Droplet size is typically bigger which delivers more water, with greater speed, to the fire source. ESFR systems reportedly extinguish fires faster and more effectively with less damage to product than in-rack systems.

Expiration Date

Date when merchandise is no longer able to be shipped.

Facility

The physical warehouse or plant where storage takes place.

FIFO (First In, First Out)

Inventory allocation method whereby the first product stored is the first product that is utilized or allocated for the fulfillment of orders.

FILO

First-in, last-out system of inventory.

Finished Goods Inventory

Products that are ready to ship.

Finished Product Inventory

Available products to ship to customers.

Floor Load

Refers to product stacked directly onto the floor of a trailer without pallets or slip sheets; product must be unloaded manually without the use of a forklift.

Flow Rack

Racking equipment that allows for the product to be stocked in through one side and removed for order fulfillment purposes from the other side. Product stored in Flow Rack is naturally allocated via FIFO based on the racking equipment design.

Forklift

A warehouse vehicle, also called a lift truck, which is used for lifting and transporting pallets of product. A forklift may have a special attachment on the front for specialized handling of product.

Forks

Lift-truck attachment used to move stock on pallets.

Freight Bill

An invoice for transportation charges generated when a load is delivered.

Freight Charge

Compensation paid to Nexus by the client for transportation services performed.

Freight Cost

This is the compensation paid to the contracted carrier by Nexus for the transportation services performed.

Fulfillment

The picking and processing of orders for shipping from a distribution or warehouse.

Full Truckload

This term refers to a shipment comprising a full or almost full load on a truck.

Gaylord

Large corrugated carton that has the same length and width as a pallet. Gaylords are usually used to protect loose parts in bulk and are frequently used in manufacturing.

Gravity conveyor

Type of conveyor that uses gravity to move materials. Skatewheel conveyor and roller conveyor are the most common types of gravity conveyor used, however, even a simple steel chute is essentially a gravity conveyor.

Gross Weight

The total weight without deduction for tare (includes packaging and container).

Handling

The labor involved in moving product received from the trailer into the warehouse dock and then into the storage location on the "IN" and moving the product out of the storage location and into a staging location to then be loaded onto a trailer on the "OUT". The Warehouse Forklift / Clamp Operator moves product IN and OUT. If additional handling is involved such as opening on days off, pick packing etc., that are not the normal handling as defined in the warehouse contract, these would be defined as additional accessororial charges for handling.

Handling Charge

Charge for normal warehouse handling (inbound or outbound, or both) to customer.

Handling Costs

Cost to warehouse or 3PL for all handling operations.

Hand Truck

Western hand truck is a device used to transport goods manually with wheels within the side rails. The Eastern hand-truck is similar except the wheels are outside the side rails.

HazMat

Short for "hazardous material." Material is deemed hazardous by the government or a carrier. HazMat may require special handling or special facilities. Not all warehouses or carriers will handle HazMat.

Hi-Lo

AKA Forklift. References the ability of the truck to lift and put down freight.

Honeycombing

The situation that occurs when a lot (see Lot) is partially depleted and the remaining space is wasted because it cannot be utilized.

Housekeeping

Keeping the warehouse presentable, organized, and safe for all parties.

In-House Damage

Damage to product that occurred while in the warehouse (i.e. water leak, dropped product, etc.).

Intermodal

Intermodal means using 2 or more, modes of transportation: rail, truck or ship. The stock can move over sea by ship, over land by rail and then, at the main rail switch, the container is removed and put on truck chassis. The stock is then carried by truck to our Distribution Centers.

Initial Storage

Warehouse storage charge for the month when product is received; it is typically billed when product is received.

Inner Packaging

Also known as “dunnage,” includes materials such as foam, paper, or wood used to minimize movement within the container.

Inventory Turns

The number of times inventory turns is calculated using the following method:

- a) Sum the Inventory In and the Inventory Out, and then divide by 2 to arrive at the Throughput.
- b) The number of Inventory Turns is equal to the Throughput divided by the Average Inventory.

JIT, Just-in-Time

An inventory system that aims to coordinate the arrival of materials or supplies at a facility at the moment that they are needed in an effort to reduce storage and holding costs.

Kitting

Assembly of product or parts within the warehouse.

Labels

Some clients require inventory or shipment labels to be attached to packaging (i.e. box, case, pallet, etc.). Many labels contain bar-coded information, to allow scanning devices to quickly and automatically transfer the information into inventory systems. In some cases, labels are pre-printed and pre-affixed by the manufacturer. In other cases, labels must be created and applied by the Distribution Center prior to shipment of the product in accordance with retailer or customer requirements.

Layout

Design and set-up of warehouse storage.

Less Than Container Load (LCL)

Shipments weighing less than required for the application of a full container rate. When the shipment is less than a full container load, the freight may be calculated as an LCL shipment.

Less Than Truckload (LTL)

Shipments weighing less than required for the application of a truckload rate. A typical full truckload shipment is 39,000 – 44,000 pounds. Weight breaks may vary across LTL classifications and in some instances it is less expensive to apply a full truckload rate even though the shipment size may be less than 39,000 – 44,000 pounds.

Leveler

A dock plate that adjusts to the height of a trailer.

License Plate Number

Otherwise known as an “LPN,” this is a number used to identify products and containers.

LIFO (Last In, First Out)

Inventory allocation method that selects newest inventory first.

Lift truck

A vehicle that is utilized to move and transfer product/freight in a distribution center, warehouse, terminal, manufacturing site, or dock. Often referred to as a forklift.

Live Rack

Slanted rack that allows for easier picking. Items are put into the high end of the rack and then picked from the low end. Desirable for FIFO picking procedures.

Load

The product that is picked and loaded onto a truck and transported to a consignee.

Location

Each product has a specific location in the warehouse.

Location Audit

Routine audit of location records to ensure that records are compatible with actual placement of product within the warehouse.

Locator System

Locator systems allow for more effective inventory-tracking. Product can be stored in a way that makes sense for the warehouse, such as high demand product in more accessible locations. Locator systems assist in better accuracy with inventory tracking and control as well because it is all computerized.

Logistics

The processes and services associated with planning and implementing flow of storage and shipments in a 3rd Party operation required to meet the customers' needs in an efficient manner.

Loose

Product remainder in a specific location or layer.

Lot

A group of product with the same run or manufacturing date.

Lot Number

Identification number assigned to specific product for tracking purposes that is usually tied to a date or a production run.

Lot Number Traceability

The ability to trace items through their lot number. This is helpful when a specific product is needed or information about a specific product is required.

LTL, Less-than-truckload

Transportation term that describes shipments that are less than a trailer load. LTL also is used to describe the carriers that handle these loads. LTL carriers generally use strategically placed hubs to sort and consolidate LTL shipments into full-truck-load shipments.

Lumper

A contracted worker who assists in the loading and unloading process.

Manifest

A document that lists all of the products being transported; used when loads are combined.

A loading Manifest will be printed to the Warehouse so that they know who will be picking up the load and how to properly load the trailer. A Driver Manifest will be auto-faxed to the carrier so that they know the order of the stop(s), the address and shipping requirements of the client(s).

Master Carton

A large carton that is used to hold and protect smaller cartons or packages of product. Using a master carton reduces handling as one larger piece instead of multiple small pieces.

Master Pack

A carton containing a specific number of product or multiple case quantities.

Material Handling

The services and processes the warehouse must utilize to move, store and otherwise handle materials.

Man-up

Lift trucks that raise the operator as well as the load. Two types of man-up lift trucks are turret trucks and order selectors.

Motorized pallet truck

There are two different types of motorized pallet trucks, the “Walkie” and the “Rider.” The “Walkie” is built so that the operator can walk alongside it. The “Rider” is built so that the operator can stand and ride on the truck.

Narrow aisle (NA)

Specialized lift trucks designed to be used in narrow aisles of 8 to 10 feet.

Net Storage Area

Space in the warehouse (in square feet or meters) that is actually used for storage. This does not include aisles, docks, offices and staging areas.

Net Weight

Product weight before being packed with materials or packaging. The total weight of the product with deduction for tare or packaging. For example, the net weight on a roll is the total weight of the roll less the fiber core and wrap.

Obsolete Stock

Stock that has no useable purpose that remains in the warehouse.

On-Hand Inventory

The amount of product in the warehouse. The product may be designated as shippable, damaged, on hold, or pending shipment (allocated to an order).

On Hold

Refers to product that is designated as unable to be shipped; may be product with damage, questionable quality, expired shelf life, etc.

Order

A directive, sent by the owner of the goods, to ship product out of the warehouse. An order specifies product, quantity, shipping date, and destination and may contain special instructions.

Order cost

The cost of labor, time, and other activities needed in an instance that a product is ordered.

Order Cycle

Based on demand and frequency for orders of specific product, the order cycle is a replenishment cycle that determines how often a product needs to be sent as an inbound to the warehouse in order to keep up with demand.

Order selector

Also known as an order picker, an order selector is a specialized lift truck that allows a person to ride on it with the pallet in order to pick from various locations and levels.

O.S. & D.

Over, Short and Damage; it refers to the condition of a load of product which arrives in a defective condition, or whose quantity does not match the bill of lading (cases over or short).

OSHA

Occupational Safety & Health Administration, a branch of the US Department of Labor.

Overage

When more has shipped on a load than was intended or was indicated on the BOL.

Over the Road Carrier

A truck or trailer used in hauling freight by road to destinations outside a 70 mile radius of the Nexus facility.

Packing List

The packing list is created in the Distribution Center. The packing list identifies the quantity and weight of each product on the order and each individual item # (unit ID, serial number, etc.) if applicable. It is a comprehensive list identifying exactly what is being shipped on the order.

Pack Size

Describes how a product is packaged such as “20 cartons per pallet” or “6 units per carton”.

Pallet

A wooden or plastic base upon which layers of product are stacked for storage and transporting with a forklift or pallet jack.

Pallet ID

The bar code tag that is placed on a pallet for tracking purposes.

Pallet inverter.

A machine that aids in the transfer of product from one pallet to another. The pallet inverter flips over the pallets and product in order to put the product on the new pallet and take off the old.

Palletize

To put materials and product onto a pallet.

Pallet Jack

Material handling equipment consisting of pallet forks on small wheels that is used in the warehouse to move cases of product. It may be a motorized unit guided by an operator who stands on a platform; or it may be a motorized or manual unit guided by an operator who is walking behind or beside it.

Pallet Tag

Refers to the bar code sticker placed on a pallet of product.

Paper-roll clamp

Designed specifically for the handling of large paper rolls, the paper roll clamp is a lift truck attachment that clamps around the roll and also allows for a full 360 degree rotation.

Partial

Less than a full pallet of product.

Perpetual Inventory System

A continuous inventory tracking method where inventory taken out is recorded with each outbound order and new inventory is recorded with each inbound order.

Physical Inventory

A physical count of everything in the warehouse.

Physical inventory

Refers to the process of counting all inventory in a warehouse or plant. Operations are usually shut down during a physical inventory.

Pick/Pack

A warehouse operation that involves picking individual items from cases and putting them together a carton or pack for shipment.

Picker

The person in charge of picking specific stock for orders.

Picking

Picking is the movement of stock from a storage area to a staging area. The Fork Lift / Clamp Operator will “pick” the stock which is assigned to a particular order. The Fork Lift / Clamp Operator must pay close attention and match the items listed on the Pick Ticket to the information on the product.

Pick Ticket

The Pick Ticket is a document used by the Forklift / Clamp Operator or picker in the Distribution Center who will be locating the stock for the order. The Pick Ticket contains information such as, product location, quantity, lot numbers, serial numbers or unit numbers.

Pick Time

The time it takes to pick and document specific stock for an order.

Pick Slot

Location in warehouse where dedicated stock is stored. Also known as a primary location.

Pick-to-clear

Warehouse picks from locations with the least amount of product on hand in order to clear the area.

Pick-to-light

Used in high volume piece picking, technique where pickers are directed to product by lights.

Piggy Back

The process of transporting a trailer on a railroad flatbed; the trailer is then hauled to its final destination by truck.

Pig

A type of trailer that can be transported on a rail car and also pulled by truck.

Pinwheel

Pinwheeling is a process of arranging pallets on a truck or product on a pallet to make the best use of space when dealing with items of different sizes.

Plugging

Plugging is a method of switching direction, stopping, or slowing down without using a break on electric industrial vehicles.

P.O.D.

Proof Of Delivery; a signed bill of lading.

Pool

A combination of less than truckload (LTL) freight built to form a full or almost full truckload. By “sharing” space in a vehicle, the client and Nexus can minimize cost.

Private Warehouse

Warehouse that is operated by the owner of what is being stored inside of it.

Product Code

A series of characters assigned by the manufacturer to identify each of its products. This is usually the SKU.

Pro Number

A number assigned to a shipment by the carrier for tracking purposes.

Push-back rack

A rack system that pushes stored product up an inclined ramp in order to provide for deep pallet storage.

Push sorter

Device used with conveyer systems, a push sorter moves product on the conveyer using a stationary device with an arm that can push and sort.

Put-to-light.

Similar to pick-to-light. Lights are used to guide which container the picked item is to be put into.

Public warehouse.

A business that provides the use of space for storage to a variety of clients. This space can be leased for varying amounts of time determined by the contract set by both parties.

Putaway

Movement of stock from the time it is unloaded to the time it is put in its final location.

Quality Assurance, Quality Control

The inspection of product as it comes in or goes out of the warehouse in order to ensure quality.

Queue time.

Amount of time before set-up or processing of a job.

Rack

Metal framework in the warehouse used to store products several levels high.

Radio frequency (RF).

A data system made up of devices that use RF to transmit information into a host system from different locations or from “on the job.”

Ramp

Inclined area that connects to the warehouse to facilitate easier movement in and out of the warehouse by trucks and other equipment.

Random location storage

A storage method where product is stored randomly. A benefit of random storage is that it allows more productive utilization of space, however, using this strategy may decrease accuracy as like product is not necessarily together.

Rate Sheet

A schedule of warehouse or transportation charges for a client.

RDC

Retail Distribution Center which replenishes to stores.

Reach truck.

The reach truck is a narrow-aisle (8”-10”) lift truck specially designed for racked pallet storage. It is also known as a stand-up reach, straddle reach, or double-deep reach. The reach truck is designed with outriggers in front and telescoping forks controlled by a hydraulic mechanism. This mechanism allows you to pick up the load and pull it back over the outriggers in order to reduce the overall truck and load length. It is helpful for turning down a narrow aisle. The reach truck has a mechanism that allows for extended reach in order to store pallets two-deep in a double deep rack.

Real Time

Information is updated and saved instantaneously.

Receiving Report

A record of the condition of all inbound stock as it arrives.

Receiving Tally

A list of all the inbounds received in an effort to ensure accuracy.

Recurring Storage

An amount charged to a client for monthly storage; it is based on the amount of product stored in the warehouse on the first day of the month or specified by the contract.

Refrigerated Warehouse

Temperature controlled warehouse that serves well for storage of food and other perishable products.

Release

Authorization to ship.

Re-order point.

Inventory reaches a specific point based on demand where it is set for replenishment.

Repack

Packaging material differently than how it arrived. Example: making a pallet of 60 cartons into 3 pallets of 20 cartons.

Replenishment

Refilling of a picking location.

Return Authorization

Permission given to a carrier or consignee to return product to Nexus.

Return Authorization Number

This is usually a number supplied by the client authorizing the return of product from a consignee to Nexus (i.e. RPC or RMA).

Reverse Logistics

The logistics needed to plan return of product or a load. This may include a return order, transportation, and put-away.

RF

Radio Frequency scanning and transmission of data.

RF Gun

A hand-held radio frequency terminal with a screen, a keypad, and a scanner that is used by warehouse personnel to scan pallet tags and location tags.

RFID, Radio frequency identification

An alternative to barcodes, an RFID is a device on an object used to transmit data to an RFID receiver. RFIDs vary in size depending on the object and hold more data than the standard barcode. They are also advantageous because the data stored on the RFID can be easily changed as they do not require line-of-site in order to transfer this data.

Roller conveyor

A conveyer that uses rollers to move product either by gravity or automation.

Safety stock.

Used to ensure availability of stock in case of deviations in supply or demand. These are calculated by using past deviations. To determine the optimal safety stock level, a required service level multiplier is needed.

SCAC

Standard Carrier Alpha Code; a unique 2 to 4 letter code assigned to transportation companies for identification purposes. SCAC codes are required for EDI, and are printed on bills of lading and other transportation documents.

Scheduling

Logistics involves daily shipments of stock into and out of the Nexus Distribution Centers. There are a limited number of docks / doors where outbound vehicles can be loaded and inbound vehicles unloaded. There also may be limited people and equipment to handle these tasks. Consequently, resources (people and equipment) and vehicle traffic must be managed to avoid bottlenecks and inactivity. This can be achieved through the use of the Appointment Log in the Phoenix System (RE.01).

Serial Number

Number assigned to a single item in order to identify and differentiate it from others.

Shipment

Freight that is transported from one location, such as a regional distribution center (RDC) or manufacturing site, to another, such as a consignee.

Ship To

Delivery address for the consignee.

Shrinkage

Reduction in inventory measurement (often referred to as a result of loss or theft).

Shuttle

A load transported from one customer-related facility to another; does not include product shipped to a consignee.

Skatewheel conveyor

Conveyor that moves product using wheels.

SKU

Stock Keeping Unit; a product code assigned by the owner of the goods.

SKU (Stock Keeping Unit)

A number (product code) assigned to a single item or items by the manufacturer.

Slip Sheet

A sheet of cardboard on which product is stacked; used instead of a pallet.

Slip Sheet Attachment

An attachment to the front end of a forklift that is used to handle product on a slip sheet.

Slotting

Approach used to determine the best placement and locations for products in the warehouse depending on its dimensions and how often the item is picked.

Soft Allocation

Initial allocation of inventory to an order which will commit the inventory to the order but not specifically pull it from a certain lot.

Split Month Billing

Split month billing is a variation on monthly billing. The client is charged:
A “regular” rate for inbound storage in the first half of the month, and
A “reduced” rate (i.e., 50% discount) for inbound storage with a receipt date after the 15th of the month.
This billing option can address client resistance to monthly billing (having to pay for a whole month’s storage for inbound stock that arrives later in the month).

Split Shipment

A partial shipment where the remainder of the order is on backorder and the warehouse cannot fulfill the entire request.

Spot

To place a trailer in a designated location or warehouse door.

Spot Check

Inspecting a sampling of containers in a shipment to determine if the quality of the entire shipment.

Spotter

A Nexus driver who moves trailers in and out of dock doors.

Spotting Horse

A specialized tractor used only to move trailers around the warehouse facility and place them at doors where they can be loaded or unloaded.

Stack Height

The number of pallets rolls & skids that can be safely stacked on top of each other; the client supplies this information.

Stacking

Placing stock on top of other merchandise in order to more efficiently use space.

Staging

The process of getting product from its storage area and placing it near the loading area for later shipment; or in cross docking, the process of unloading product and organizing it for immediate shipment.

Staging Area

A designated area of the warehouse near the loading dock where product is placed or arranged for shipment.

Stencils

Stencils are markings placed on the product with the ID information required by the customer for the product that they are receiving. This can be in different forms dependent on the specifics for the customer. It can be a label or just a chalk inscription with the product ID.

Stretch Wrap

Clear plastic film that is wrapped around a pallet of product to secure it.

Stock

Inventory.

Stock Allocation

When the “computer looks for and allocates stock”, it checks to see if it is available. Available stock can be used to fill the orders. When an order is input, the system will automatically look for available stock and allocate the stock to the particular order.

Stock Rotation

Way of prolonging shelf-life by moving or replacing product in a warehouse.

Storage Charge:

Charge to client for holding stock that has not moved.

Storage Rate:

Charge to client for all storage costs, usually on a month-to-month basis.

Strap Loading:

Product is loaded onto a pallet and then secured with strapping.

Strapping:

Used for securing goods onto a pallet. Can be metal or plastic.

Tag

A way to recognize a shipment or particular item.

Tally

A count performed when shipments are received in order to track and record their condition.

Tare

The weight of the wrapping holding the goods.

For rolls, the tare consists of fiber core and the wrap.

For pallets, the tare consists of the pallet and the wrap.

The tare is the difference between the net weight and gross weight.

Terminals

Break points for carriers to strategically reload freight for delivery to the final destination.

Third Party Warehouse

Warehouse operated by a 3PL Company that houses the products of their clients.

Throughput

Method of calculating average product movement.

Tie

Units per Layer

Trailer

An enclosed vehicle, towed by a truck, which is used for transporting product. There are a few different types of trailers. These include tractor trailers, semi-trailers, flat beds and reefers (refrigerated trailers). Most trailers are 45', 48', or 53' long.

Tractor

The truck that pulls a trailer.

Transaction Set

A group of data elements that represent the information on a business document, like a shipment order, and which are transmitted through EDI.

TMS, Transportation management system

System used by the transportation department which aids in such tasks as manifesting shipments, finding rate quotes, and managing carriers.

Traceability

Ability to track a shipment from the time it leaves the warehouse until the time it arrives at the consignee.

Trackable

Total quantity of weight, space, and pallets.

Transportation Tariff

A document published by a carrier that describes charges for transportation between 2 or more points, and contains other terms and conditions governing the transportation activity.

Truck Door

Area in the warehouse that is used to accommodate the loading and unloading of trailers.

Turret truck

Type of man-up lift truck with a rotating fork that can turn 90 degrees in either direction.

Unitization

To take individual items and ship them as a single larger item.

Unit load

Otherwise known as a unitized load, a unit load is any arrangement of materials that are moved by material handling equipment, such as a lift truck, as a single unit (example: palletized loads).

Unit of measure. (U/M)

The type of measurement unit used to track inventory such as pallets or eaches (individual units) in your system.

Unit-of-measure conversions

Necessary when working with multiple units of measures such as pallets and eaches. Requires a conversion such as eaches per pallet in order to make the load uniform.

Uprights

Vertical numbers used in the storage rack for identification purposes.

Value-Added

Value is added to the distribution process when there is a contribution made to the functionality, value, or usefulness of a product.

Value Added Services

Extra services that a distribution center will perform in order to meet the needs of their customers. Typically refer to special assembly, packaging, or picking services.

Vendor-managed inventory

In a 3PL, this describes the instance of a client (vendor) controlling the inventory at the 3PL warehouse. This type of inventory control can be managed in multiple ways including a periodic physical check of inventory by the vendor in order to determine what needs to be supplied to the warehouse. The vendor can also have remote access to the warehouse's inventory control system (MRP) and order based on the levels of supply and demand visible electronically.

Warehouse Receipt

Receipt for product received into the warehouse.

Wave picking

Method of picking for multiple item orders where all zones are picked simultaneously and the product is sorted later. This method of picking is often used when picking shipments for specific carriers so that the product for each carrier is in the same place and can be sorted after it is picked.

WMS, Warehouse Management System

WMS is a software designed to function around three main components: putaway, replenishment, and picking. By directing these three components, the system can logically manage the movement and storage of product in the warehouse.

Zone

Zones are locations in the warehouse where usage is determined by the characteristics of the product being stored such as special handling, or special inventory management requirements.

Zone picking

Method of order picking where the warehouse is divided into pick zones. Items are picked from each zone and then transferred on a conveyer system from one zone to the next.

APPENDIX 2

Amusing project management analogies

☺ *TIME FOR LAUGH*

To the optimist, the glass is half full. To the pessimist, the glass is half empty. To the project manager, the glass is twice as big as it needs to be.

A clergyman, a doctor and a project manager were playing golf together one day and were waiting for a particularly slow group ahead. The project manager exclaimed, "What's with these people? We've been waiting over half an hour! It's a complete disgrace." The doctor agreed, "They're hopeless, I've never seen such a rabble on a golf course." The clergyman spotted the approaching greenkeeper and asked him what was going on, "What's happening with that group ahead of us? They're surely too slow and useless to be playing, aren't they?" The greenkeeper replied, "Oh, yes, that's a group of blind fire-fighters. They lost their sight saving our clubhouse from a fire last year, so we always let them play for free anytime." The three golfers fell silent for a moment. The clergyman said, "Oh dear, that's so sad. I shall say some special prayers for them tonight." The doctor added, rather meekly, "That's a good thought. I'll get in touch with an ophthalmic surgeon friend of mine to see if there's anything that can be done for them." After pondering the situation for a few seconds, the project manager turned to the greenkeeper and asked, "Why can't they play at night?"

And this (thanks G Bee)... A project manager was out walking in the countryside one day when a frog called out to him. He bent down, picked up the frog and put it in his pocket. The frog called out again, saying, "If you kiss me I shall turn me back into a beautiful princess, and I'll stay with you for a week as your mistress." The project manager took the frog out of his pocket, smiled at it, and put it back into his pocket. The frog called out once more, "If you kiss me and turn me back into a princess, I'll stay with you for as long as you wish and do absolutely anything that you want. Again the Project manager took the frog out of his pocket, smiled at it and put it back. Finally, the frog demanded, "What's the matter? You can turn me back into a beautiful princess, and I'll stay with you for ever and do anything you want. Why won't you kiss me?" to which the project manager replied, "Understand, I'm a project manager. I simply don't have time for a girlfriend, but a talking frog that's cool."

NOTES

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