

Project Risk & Supply Chain Risk

Prepared by Dr. Dalia Hosni

Summary



PMG 663

Project Risk & Supply Chain Risk



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

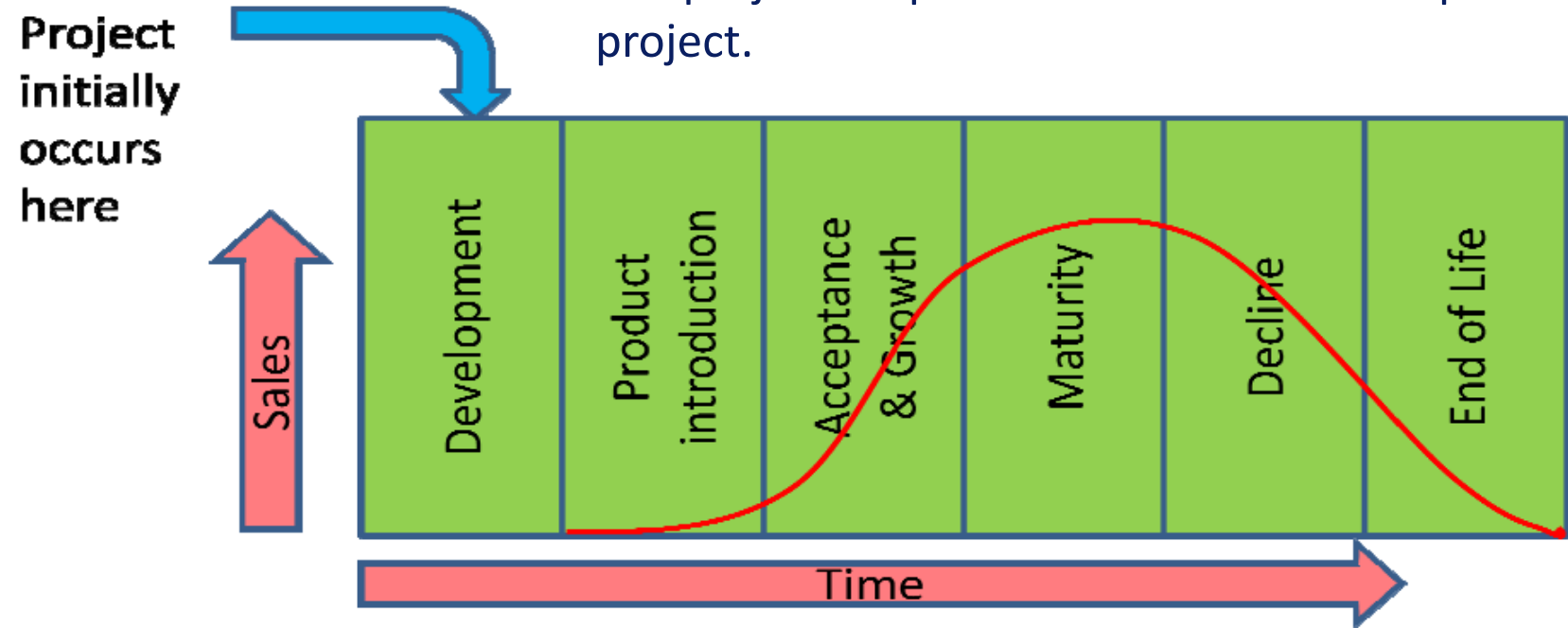
What Is a Project?

A Project : A temporary efforts that has a defined goal and definitive start and stop point

- A time-scoped/time-boxed activity
- Has a beginning, middle and an end
- Creates a unique product, service or result
- A 'progressive elaboration'

Defining the Product Life Cycle

The Product is what is created as a result of executing a project . When is talk about project management what we are talking about is the work that is being done in the project to produce and deliver the product of the project.



Risk

An unplanned or uncertain event that can impact a project

What is a Risk?



Risk

A risk is any uncertain event or condition that might affect your project. Not all risks are **negative**. Some events (like finding an easier way to do an activity) or conditions (like lower prices for certain materials) can help your project. When this happens, we call it an **opportunity**; but it's still handled just like a

**What is a
Risk?**



Types of Project Risk

15 Categories for Project Risks

Beyond the basics of what “risk” means, project managers should also know the different types of risks they may encounter. Depending on the project type, the factors that should be considered will differ.

So, let's jump straight in and look at these categories for project risks..

1- Political:

Most projects will be affected by organizational politics, but you should also be aware of the possibilities of impact from local or national politics (or even international politics, if that's appropriate for your project).

A change in government will affect policy decisions and potentially funding, especially for projects with an element of public sector work or those working with government bodies.

15 Categories for Project Risks

2- Economic

The economy has a huge impact on businesses, and that filters down to have an impact on certain projects.

3- Technological: Technology is moving on at a rapid speed, and it's possible that technological changes could make your project more or less viable over a period of time. This should be built into your approach to managing volatile projects. **There are also risks relating to using new technology for the first time, or in an immature way.**

4- Legal:

Your Legal team or advisors should be connected to changes in the law and regulations affecting your industry. These may have implications for projects that should be considered. A risk resulting from legal changes that may mean your project is no longer viable.

5- Market:

Some industries have a more stable marketplace than others, and you'll know your own market well. Risks relating to your position in the market, the demand for your goods and services and the rise of new competitors can all affect your project.



15 Categories for
Project Risks



6- Supply Chain:

Internal

External

Rarely these days will you do a project that has no reliance on anyone else. Whether that's the manufacturer of a critical part for your product, or a vendor supplying you with cloud-based software, our organizations are more linked together than ever before.

This creates risk, because when one part of the supply chain fails, the downstream implications can be significant. A supplier going bankrupt could put your project back months. Bad weather on the other side of the world could lead to crucial electrical components failing to make it your manufacturing plant on time.

Supply chain risk can also be internal, as your project team will rely on other departments to provide subject matter expertise to the project. If the people or services you need from your own staff are delayed, this can also affect the success of your project.



7- Organizational

This type of risk relates to changes in the organizational structure. This might apply if you have a change of leadership, which might in turn lead to a change in strategic direction. It's crucial to make sure project teams are aware of these risks and then what to do if they happen, because something like this could quickly make a project unviable

8- Operations

These risks relate to impacts **on how your business** is run. That could be anything from risk that would impact the ability to keep a critical process running in the factory through to making sure the project goes ahead without impacting your customer services.

9- Environmental:

Environmental risks range from those that could expose your organization to fines or even legislative action, such as illegal dumping, through to ensuring that your internal environmental policies are adhered to.

Risks in this category are likely to be heavily tied to your position on corporate and social responsibility, and can also affect reputational risk, for example if your business is seen to be polluting.

10- Financial

Financial risks on projects relate to funding cycles, access to funding and making sure that the cash flow is available to pay invoices on time. It's prudent to consider financial risks to projects because if there are problems in this area, projects could stall, putting all prior investment at risk of being wasted.



11- Resources:

Specifically, non-people resources. This kind of risk relates to whether you can get access to the equipment, materials and other resources required to deliver the project in a timely fashion. Risks around delivery of equipment or the inability to source specialist materials would fall into this category.

12- Staffing:

Alongside non-people resources, you also have to consider staffing risks. These are things like the right people not being available at the right time due to other projects overrunning, or lack of expertise within your business. It would also extend to the risk of staff sickness, and poorly timed vacations.

13- Scheduling :

Risks in this category affect the project timeline. A common risk here is that a task turns out to be more complicated than expected, and so it takes longer. This would add delay to the schedule if the task is on the critical path.

14- Reputation:

focusing on the public face of your business, think about the impact on investors and on your own staff.

15- Other

It's useful to have an 'other' category!

15 Categories for Project Risks

Chapter 01

Types of Project Risk

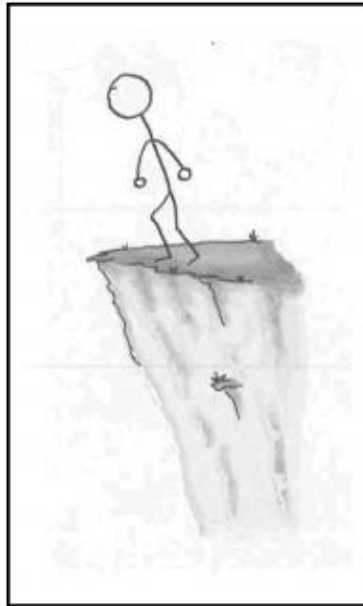


There are several types of risks that occur frequently, regardless of the specifics of the project. These common types of risk include:

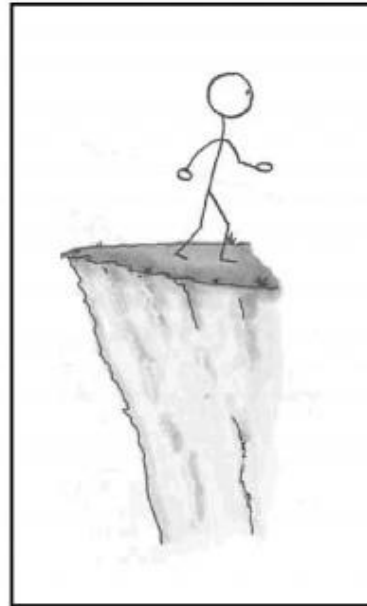
- **Cost:** The risk of events that impact the budget, especially those that cause the project to be completed over budget. Errors in cost estimation commonly generate risk in addition to external factors.
- **Schedule:** The risk of unplanned scheduling conflicts, such as events that cause the project to be delayed. Scope creep is a common reason for scheduling issues and project delays.
- **Performance:** The risk of events that cause the project to produce results that are inconsistent with the project specifications.

Risk Management Planning?

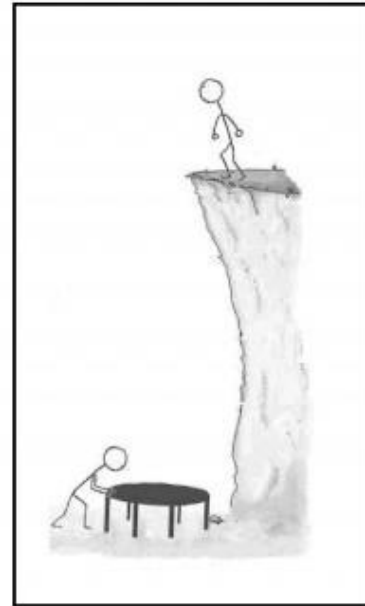
If your project requires that you stand on the edge of a cliff, then there's a risk that you could fall. If it's very windy out or if the ground is slippery and uneven, then falling is more likely



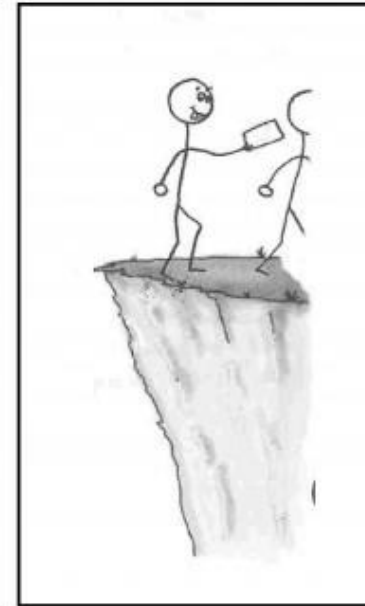
Your project



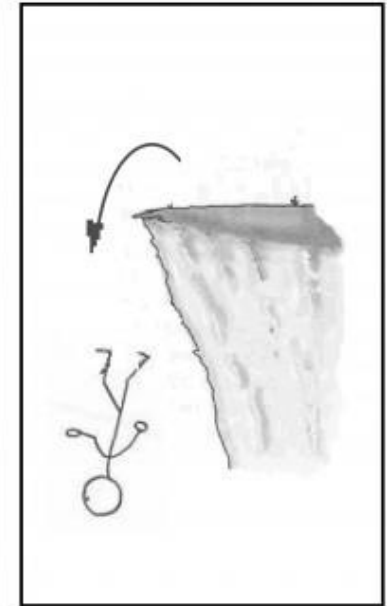
Avoid



Mitigate

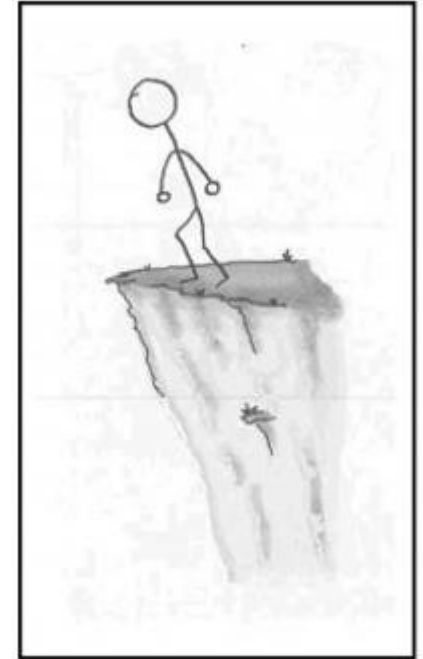


Transfer



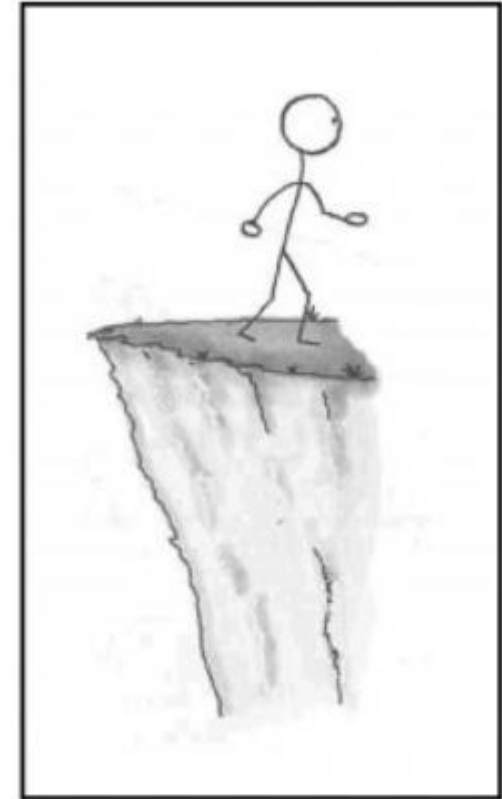
Accept

When you're planning your project, risks are still uncertain: they haven't happened yet. But eventually, some of the risks that you plan for do happen, and that's when you have to deal with them. There are four basic ways to handle a risk.



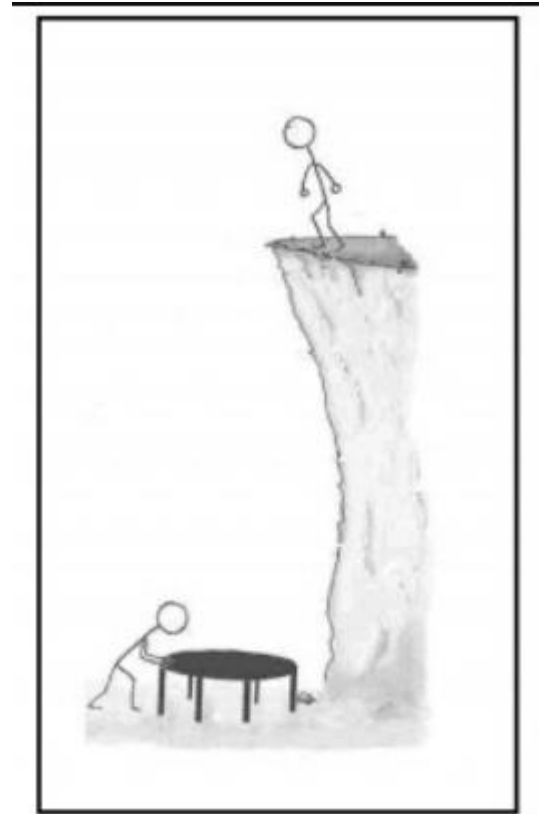
Your project

1.Avoid: The best thing you can do with a risk is avoid it. If you can prevent it from happening, it definitely won't hurt your project.



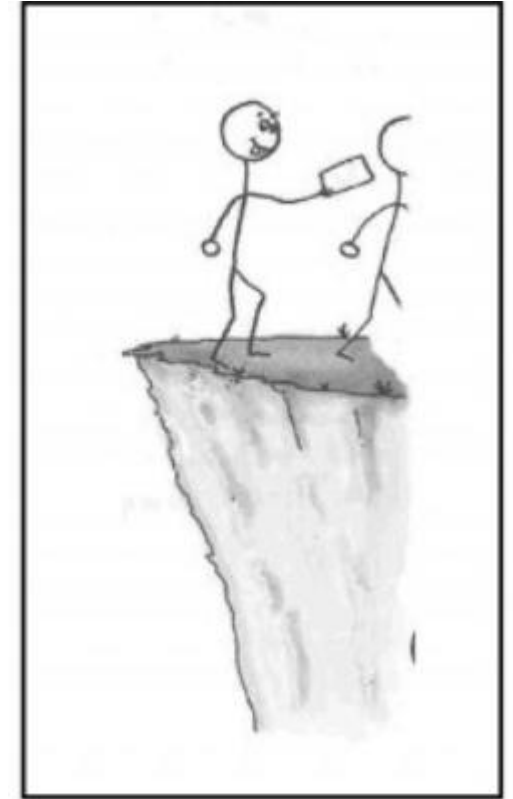
Avoid

2. Mitigate: If you can't avoid the risk, you can mitigate it. This means taking some sort of action that will cause it to do as little damage to your project as possible.



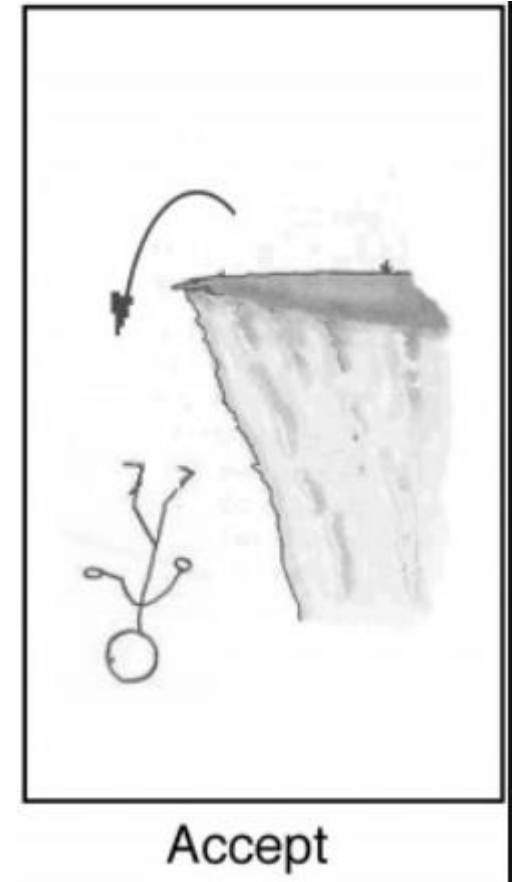
Mitigate

3.Transfer: One effective way to deal with a risk is to pay someone else to accept it for you. The most common way to do this is to buy insurance.



Transfer

4. Accept: When you can't avoid, mitigate, or transfer a risk, then you have to accept it. But even when you accept a risk, at least you've looked at the alternatives and you know what will happen if it occurs. If you can't avoid the risk, and there's nothing you can do to reduce its impact, then accepting it is your only choice.



By the time a risk actually occurs on your project, it's too late to do anything about it. That's why you need to plan for risks from the beginning and keep coming back to do more planning throughout the project.

This Process is used to determine which risks may affect the project, and can include the following resources when performing risk identification activities:

- Project Manager
- Project Team
- Risk Team
- Stakeholders
- Customers
- Subject matter experts

The above-mentioned risk information gathering techniques are well established and have been in use for many years.

Brainstorming

Delphi Technique

Root Cause Analysis

Expert Interviewing

SWOT Analysis



Brainstorming and Delphi

Brainstorming is a technique developed by Alex Osborn, The four fundamental steps to brainstorming are as follows:

1. **Focus on quantity:** The idea is to facilitate problem solving through the concept, quantity breeds quality. The idea assumes that the greater the number of ideas generated, the greater the chance of producing an effective solution.
2. **Withhold criticism:** In brainstorming, criticism of ideas generated is postponed until the team is ready to analyze the input. Instead, participants focus on extending or adding to ideas. By suspending judgment, participants will feel free to generate unusual ideas.
3. **Welcome unusual ideas:** To get a good and long list of ideas, unusual ideas are welcomed. They can be generated by looking from new perspectives and suspending assumptions. These new ways of thinking may provide better solutions.
4. **Combine and improve ideas:** Good ideas may be combined synergistically, to form a single improved good idea, as suggested by the counterintuitive "1+1=3". It is believed to stimulate the building of ideas by a process of association.

Delphi Technique



The Delphi Technique was developed by the RAND Corporation (an acronym for **R**esearch **A**nd **D**evelopment) in the 1960s and was created as an interactive forecasting method that relies on a panel of independent experts. Usually, all participants maintain anonymity. Their identity is not revealed even after the completion of the final report. This stops them from dominating others and using their authority or personality. This frees participants from their personal biases, minimizing the "bandwagon effect" or "halo effect", allowing them to freely express their opinions, encouraging open critique and admitting errors by revising earlier judgments.

Root Cause Analysis (RCA) and Expert Interviewing



The RCA Technique RCA is a reactive method of problem detection and solving, initially. The analysis is performed after an event has occurred. This allows practitioners to identify process 'triggers', so that RCA becomes a proactive method. In other words, RCA is able to forecast the possibility of an event before it might occur.

Expert Interviewing is the process of interviewing subject matter experts to obtain critical information for the project.

SWOT Analysis



This one analysis is generally set up as a grid with strengths and weaknesses as the two major columns, and opportunities and threats as the two major rows in the grid.

The idea is to see where the organization's strengths and weaknesses play against opportunities and threats using the four following comparisons:

	Strengths	Weaknesses
Opportunities		
Threats		

SWOT Analysis



- **Strengths-Opportunities** - identifies how organizational strengths help the organization to capitalize on opportunities
- **Weaknesses-Opportunities** - identifies organizational weaknesses, from the perspective of making the necessary improvements, to enable the organization to capitalize on opportunities
- **Strengths-Threats** - identifies how our organizational strengths help us deal with competitors or threatening situations
- **Weaknesses-Threats** - identifies how our organizational weaknesses leave us vulnerable to external competition or threats

	Strengths	Weaknesses
Opportunities		
Threats		



Chapter 02

The Risk Register

Risk Register													
Project						PM							
Project ID						Updated							
Sponsor						Version							
Risk Priority	Description	Probability	Impact	Result	Risk Category	Risk Trigger	Response Strategy	Contingency strategy	Owner	Entry Date	Response Due Date	Actual Date	Risk Realized?
				0									
				0									



The risk register becomes a key planning tool for the project. Understand that although a risk identifies only the probability of an event occurring, the possibility of the event is deemed to be real, true and requires assistance in monitoring.

The risk register : contains a description of the risk, it's probability, its impact in dollars, a category of risk, the triggering event that indicates the risk is about to occur, the risk response strategy, the risk owner, the date the risk was identified, a due date for resolution and most importantly, the risk's priority.

Note

Any risk with a probability percentage of 70% or greater is no longer a risk, it's an issue!

Risk Register Updates

Partial List of Risk Register Updates:

- ☐ Ranking and prioritization of project risks
- ☐ Grouping risks by categories
- ☐ Risks requiring near-term response
- ☐ Risks requiring additional analysis and response
- ☐ Low priority risks to monitor
- ☐ Look for trends in results – regression analysis or trend charts

Risk Register Updates

Risk register updates will generally include the outcome of risk assessments, risk audits, and periodic risk reviews. This can include identification of new risk events or updates to risk probability, risk impact, risk priority and risk response plans

An important use of the risk register is to view the actual outcomes of the project risks and risk responses against anticipated risks. This data can help project managers plan for risk as the project moves forward

Risk Register Updates



Risk Register updates are an output of Perform Qualitative Risk Analysis, Perform Quantitative Risk Analysis, Plan Risk Responses and Monitor & Control Risks.

Risk Register Updates

The risk register is completed at this point and can include:

- ☐ Identified risks and descriptions
- ☐ Triggers
- ☐ Response strategy
- ☐ Specific actions taken if risk occurs

تحديد المخاطر
ووصفها

المحفزات

إستراتيجية
الإستجابة

إتخاذ إجراءات
محدده في حالة
حدوث مخاطر



The risk register is designed to be written to a level of detail that corresponds with the priority ranking of the risk and its associated response. Frequently, the lower level, low priority risks are placed on a 'watch list' for periodic review and monitoring.

Plan Risk Responses

Contingency Plans

Contingency plans are developed for a specific risk. Contingency plans are generally developed when you have accepted a risk and now have developed a plan 'B' or plan 'C' as a contingent response. These plans are executed only under predefined conditions, and when there is sufficient warning to implement the plan.

Fallback plans are implemented when a contingent response is not effective.

Residual and Secondary Risks

Residual risks are identified as risks that remain after a risk response strategy was implemented. It is possible that residual risks can be identified in the risk planning process, in which case they are subject to contingency and fallback planning.

Plan Risk Responses

- ❑ if you know that certain key personnel on the project might leave before the project is over, your risk response strategy may include required cross-training of other lower level resources.
 - ❖ There is a potential residual risk that even with cross-training, the lower level resources might not perform to the level expected. In this event, you may have identified a contingent or fallback plan to address the residual risk.

A secondary risk is a risk that results from implementing a risk response strategy. Secondary risks can be identified in the planning process, or they might occur as a result of discovery.



- ❑ In most large organizations, there are individuals who specialize in risk auditing and conducting risk reviews.
- ❑ You would do well to learn as much as you can from these individuals about project risk - it will help you do a better job of identifying risks and planning risk responses.
- ❑ Usually, risk audits are periodically scheduled throughout the project.
- ❑ They are typically conducted by people outside of your immediate organization.

Why do you think that is so?

There are several reasons why auditors are not part of the project team:

Provides for an objective review of risks

Provides a fresh pair of eyes to review risk elements from a different perspective

Can help identify risks not considered by the team

- ☐ Periodic and scheduled
- ☐ Should occur to determine if any risk priorities or ratings have Changed

Risk audits

- ☐ Carried out throughout project life
- ☐ Typically performed by experts outside project team

Additional Risk Tools

Variance and Trend analysis compares planned results to the actual results. Variance tools such as earned value analysis can be used for monitoring overall project performance. As a result, potential forecasts of deviation at the project's completion from cost and schedule targets are possible.

Technical Performance Measurement compares technical accomplishments during project execution to the project management plan schedule of technical achievement. Quantifiable measurements are taken and compared against actual results.

Reserve Analysis compares the amount of contingency reserves remaining to the amount of risk remaining at any time in the project.

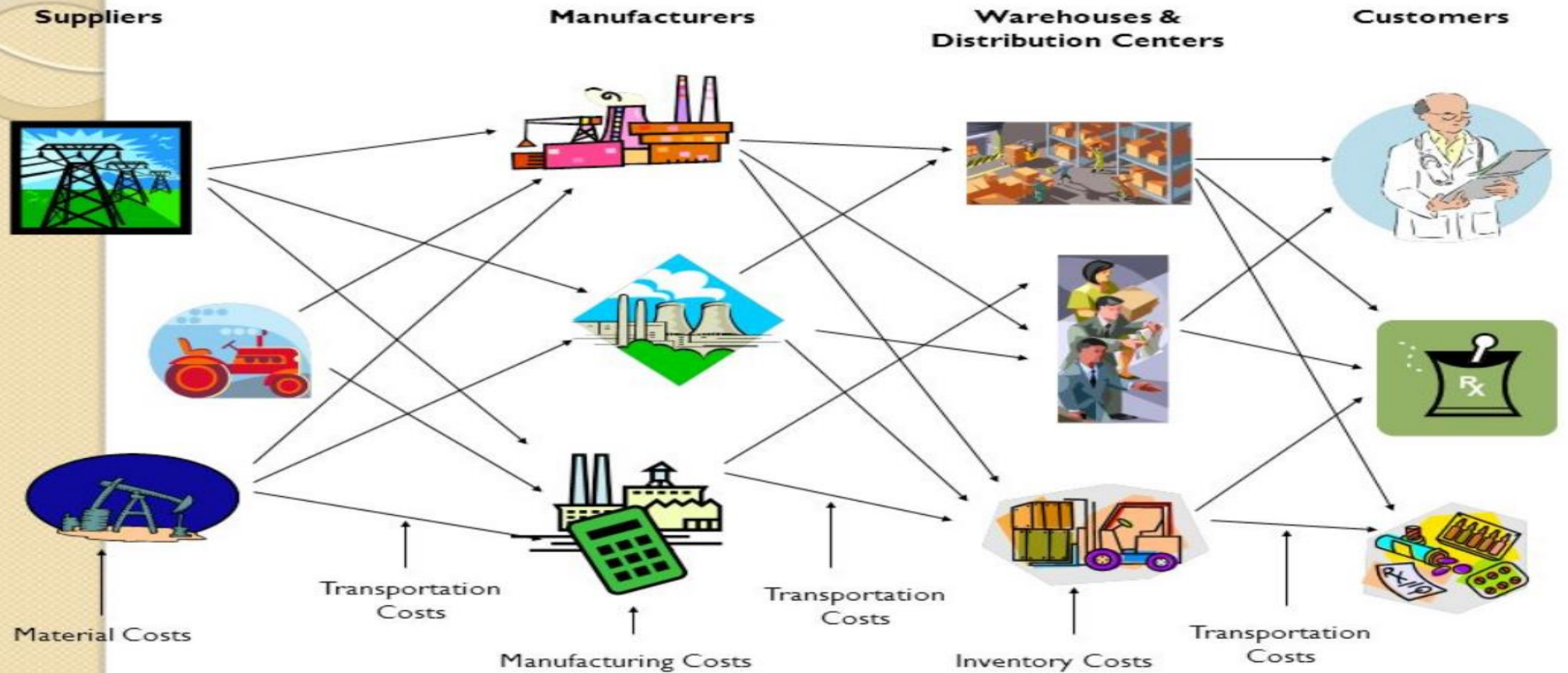
reserve analysis and the funds set aside for contingencies apply only to the specific risks on the project for which they were set aside

Workarounds

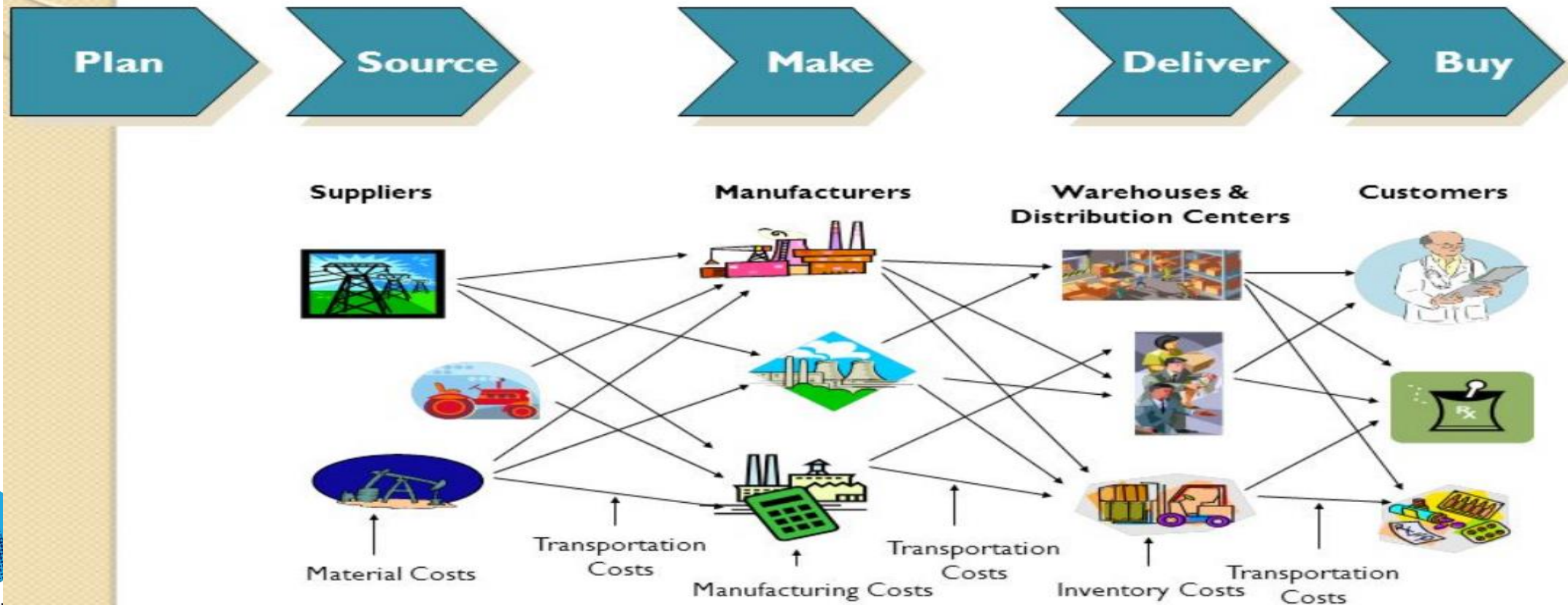
- ❑ Workarounds are usually employed when no contingency plan exists, and are generally executed 'on the-fly' to address some unplanned event.
- ❑ The result of implementing a workaround can be the identification of an undiscovered risk for which the contingency and fallback planning can now be addressed.

- ❖ Supply chain management spans all movement and storage of raw materials, work- in-process inventory, and finished goods from point of origin to point of consumption (supply chain).

The Supply Chain



The Supply Chain – Another View



More difficult than manufacturing

Focuses on human resources and support services

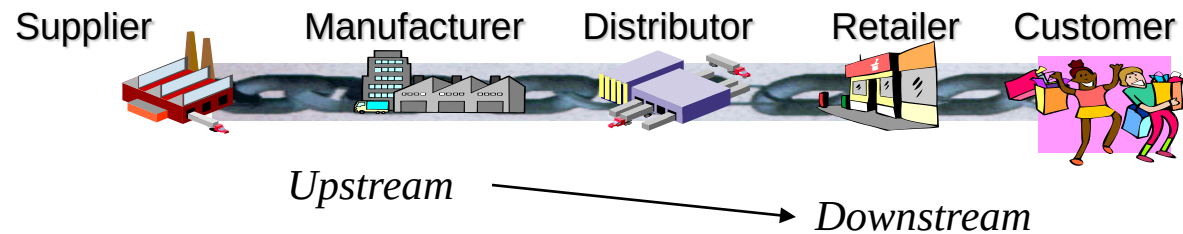
More compact and less extended

Does not focus on the flow of physical goods

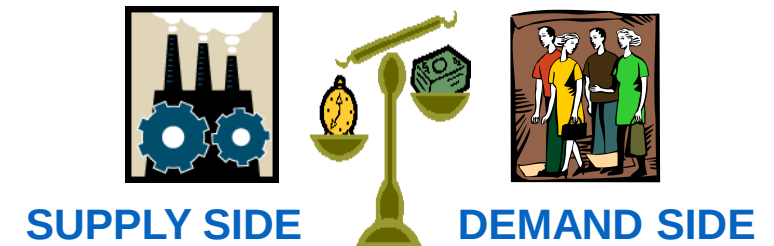
Chapter 04

Supply chain management

- A supply chain consists of



- aims to Match Supply and Demand,
profitably for products and services



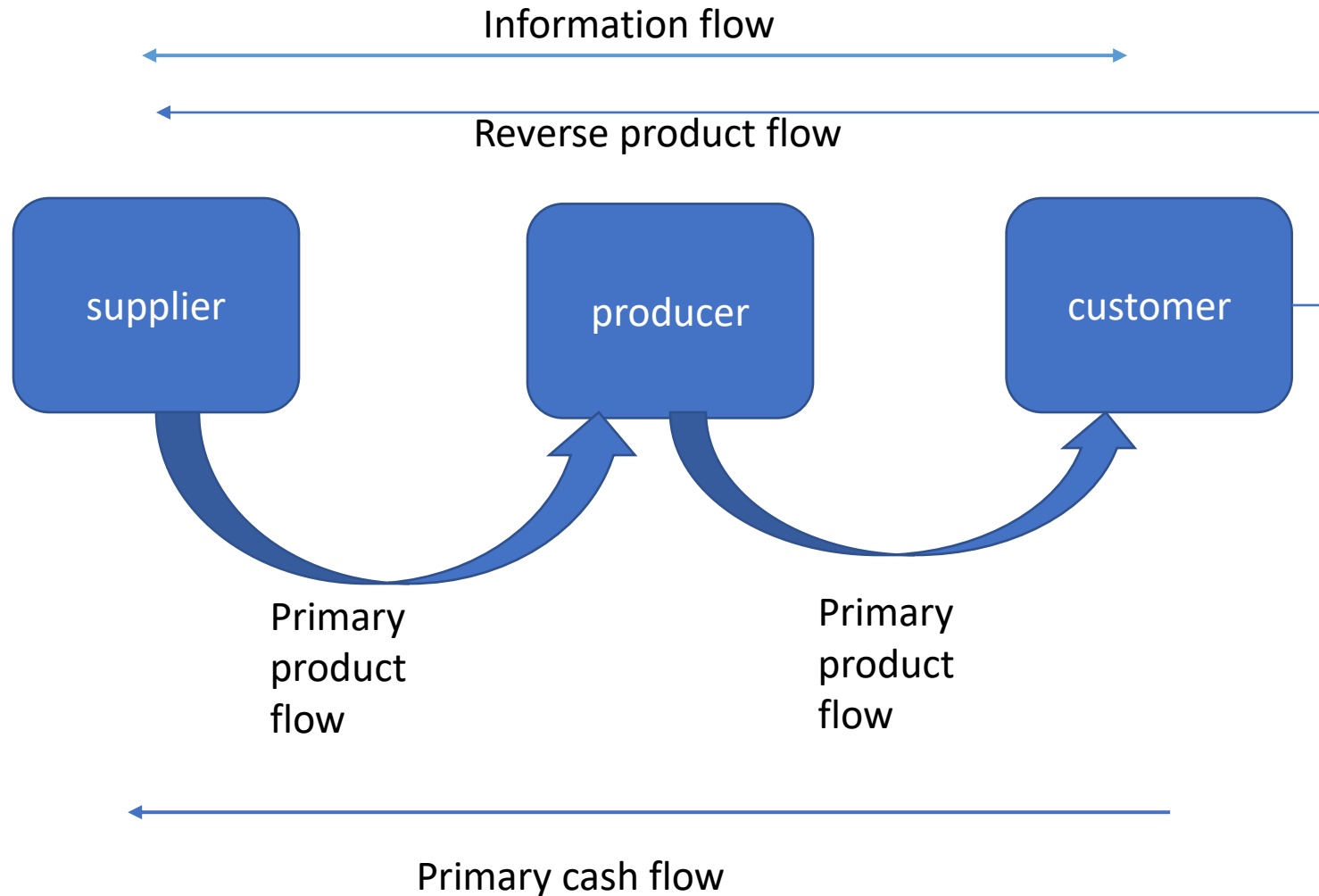
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Supply chain flow diagram

- Supply chain management is control of supply chain as process from supplier to manufacture to wholesaler to retailer to consumer.
- Supply chain management flow can be divided into three main flows
 - The product flow
 - The information flow
 - The finance flow

Supply chain management flow



What Is Supply Chain Management (SCM)?

A set of approaches used to efficiently integrate

- ❖ Suppliers
- ❖ Manufacturers
- ❖ Warehouses
- ❖ Distribution centers

So that the product is produced and distributed

In the right quantities
To the right locations
And at the right time

System-wide costs are minimized and

Service level requirements are satisfied

What is Supply Chain Risk Management?

Supply Chain Risk Examples

Supply chain risk includes a wide variety of problems with vendors, suppliers, shipping agents, resellers, and other third parties. Those issues can disrupt production, operations, sales, and projects. They can also lead to quality issues, accountability, and reputational conflicts. Here are some examples that expose supply risk:

Price Increases

Shortages

Supplier Relationships

Quality Failures

Delivery Failures

Supply Shocks



What is Supply Chain Risk Management?

Supply Chain Risk Examples

Price Increases

Rising prices are caused by supply, demand, currency instability, and customs tariffs. Volatility in prices can jeopardize financial projections and profitability of the business.

What is Supply Chain Risk Management?

Supply Chain Risk Examples

Shortages

These can arise from lacking a component, material, or part needed to produce a finished product. Shortages may be short-term availability issues or long-term if the supplier has discontinued the required items.

What is Supply Chain Risk Management?

Supply Chain Risk Examples

Supplier Relationships

If litigation or some other dispute ruptures your relationship with a supplier, the scenario will lead you to replace the supplier.

Supply Chain Risk Examples

Quality Failures

Quality failures occur when shipments of certain parts do not meet the given specifications or perform as expected.



What is Supply Chain Risk Management?

Supply Chain Risk Examples

Delivery Failures

Carrier and logistical issues can result in late deliveries, damaged packages, or lost shipments.

What is Supply Chain Risk Management?

Supply Chain Risk Examples

Supply Shocks

Sudden worldwide or industry-wide drop in supply due to events such as a pandemic, natural disaster, labor dispute, or trade embargo.

External Supply Chain Risks

As the name implies, these global supply chain risks come from outside of your organization. Unfortunately, that means that they are harder to predict and typically require more resources to overcome. Some of the top external supply chain risks include:

- ❑ **Demand Risks:** Demand risks occur when you miscalculate product demand and are often the product of a lack of insight into year-over-year purchasing trends or unpredictable demand.
- ❑ **Supply Risks:** Supply risks occur when the raw materials your business relies on aren't delivered on time or at all, thereby causing disruption to the flow of product, material, and/or parts.
- ❑ **Environmental Risks:** Environmental risk in the supply chain is the direct result of social-economic, political, governmental, or environmental issues that affect the timing of any aspect of the supply chain.
- ❑ **Business Risks:** Business risks occur whenever unexpected changes take place with one of the entities you depend on to keep your supply chain running smoothly — for example, the purchase or sale of a supplier company.

- ❖ This refers to any supply chain risk factors that are within your control, and that can be identified and monitored using supply chain risk assessment software, robust analytics programs, IoT capabilities, and more.
- ❖ Although internal supply chain risks are more manageable than external ones, they're still — to some degree — unavoidable. Here's what to look for:

- ❑ **Manufacturing Risks:** Manufacturing risks refer to the possibility that a key component or step of your workflow could be disrupted, causing operations to go off schedule.
- ❑ **Business Risks:** Business risks are a product of disruptions to standard personnel, management, reporting, and other essential business processes.
- ❑ **Planning and Control Risks:** Planning and control risks are caused by inaccurate forecasting and assessments and poorly planned production and management.
- ❑ **Mitigation and Contingency Risks:** Mitigation and contingency risks can occur if your business doesn't have a contingency plan for supply chain disruptions.

The five sources of supply chain risk

Demand Risk

- Loss of major accounts
- Volatility of demand
- Concentration of customer base
- Short life cycles
- Innovative competitors

Supply Risk

- Dependency on key suppliers
- Consolidation in supply markets
- five sources of supply chain risk arising from off-shore sourcing
- Potential disruption at 2nd tier level
- Length and variability of replenishment lead-times

Process Risk

- Manufacturing yield variability
- Lengthy set-up times and inflexible processes
- Equipment reliability
- Limited capacity/bottlenecks
- Outsourcing key business processes



The five sources of supply chain risk

Network/Control Risk

- Asymmetric power relationships
- Poor visibility along the pipeline
- Inappropriate rules that distort demand
- Lack of collaborative planning and forecasts
- Bullwhip effects due to multiple echelons

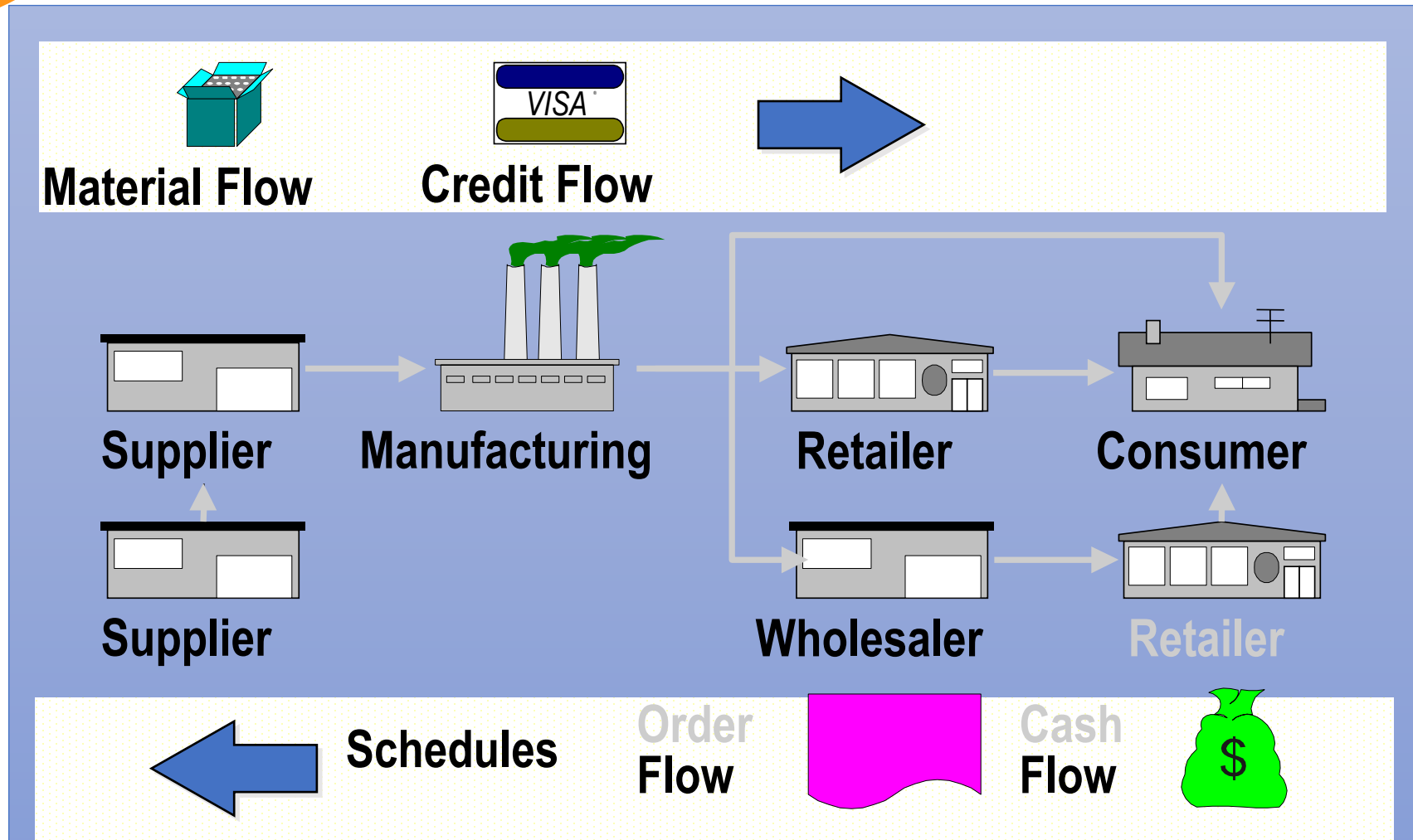
Environment Risk

- Natural disasters
- Terrorism and war
- Regulatory changes
- Tax, duties and quotas
- Strikes

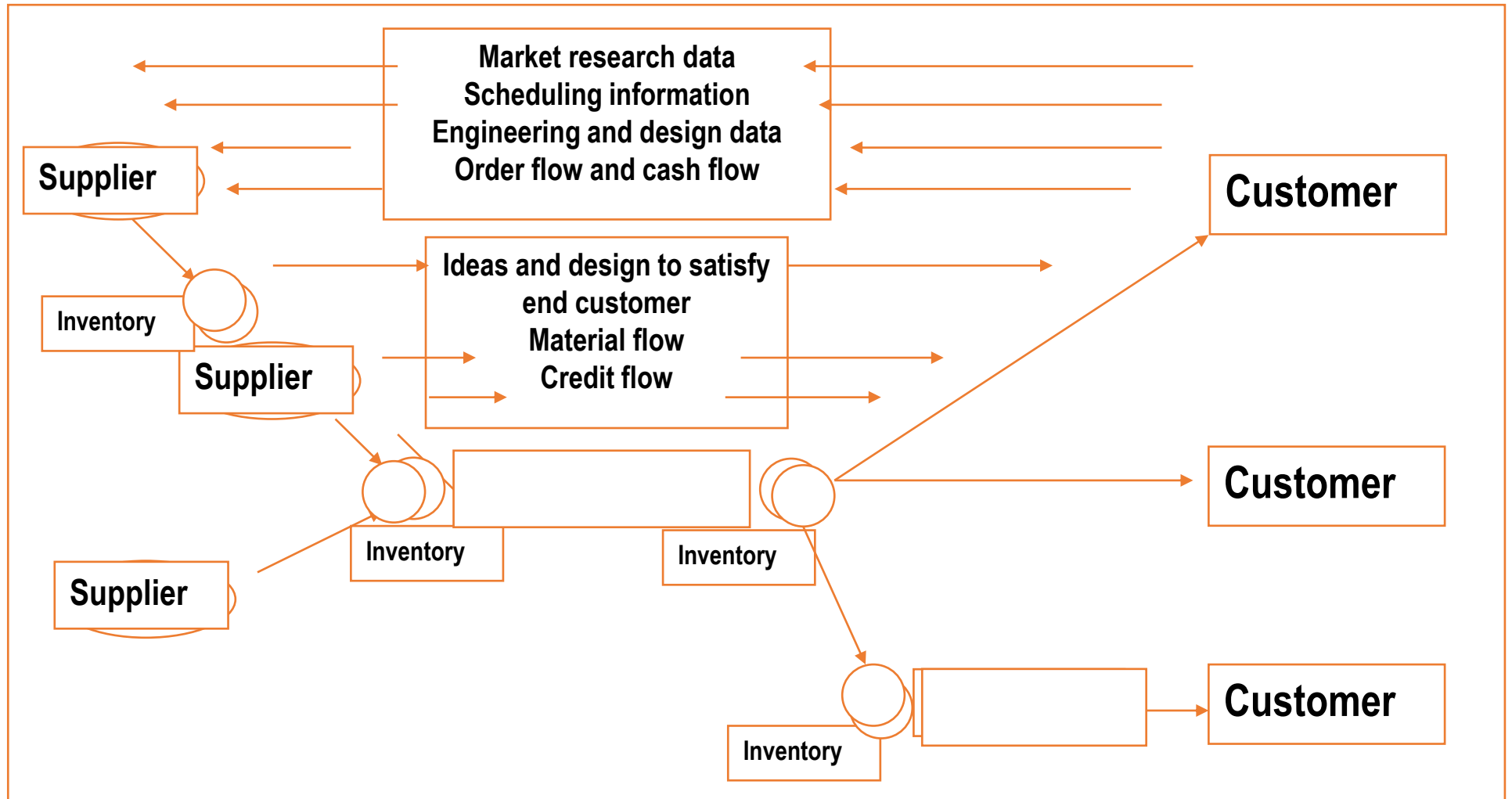


- Planning, organizing, directing, & controlling flows of materials
 - Begins with raw materials
 - Continues through internal operations
 - Ends with distribution of finished goods
- Involves everyone in supply-chain
 - Example: Your supplier's supplier
- Objective: Maximize value & lower waste

The Supply-Chain



The Supply Chain



Supply chains in a global environment must be:

- Flexible enough to react to sudden changes in parts availability, distribution, or shipping channels, import duties, and currency rates
- Able to use the latest computer and transmission technologies to schedule and manage the shipment of parts in and finished products out
- Staffed with local specialists to handle duties, trade, freight, customs and political issues

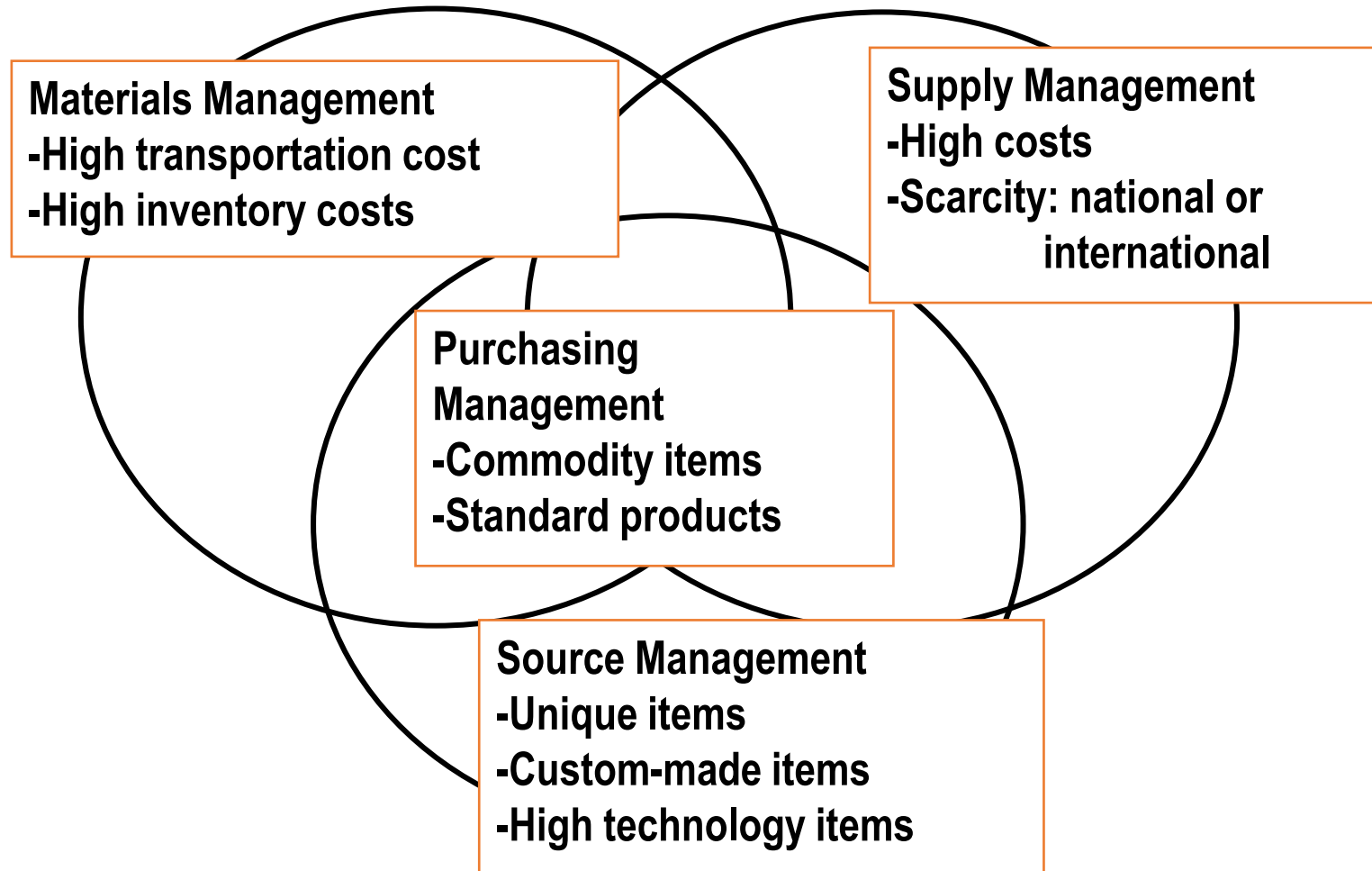
- Major cost center
- Affects quality of final product
- Aids strategy of low cost, response, and differentiation

Supply-Chain Costs as a Percent of Sales

<u>Industry</u>	<u>Percent of Sales</u>
• All industry	• 52%
• Automobile	• 67%
• Food	• 60%
• Lumber	• 61%
• Paper	• 55%
• Petroleum	• 79%
• Transportation	• 62%

- Help identify the products and services that can be best obtained externally; and
- Develop, evaluate, and determine the best supplier, price, and delivery for those products and services

The Purchasing Focus



1- Order processing

The Logistics activities start from the order processing which might be the work of the commercial department in an organization. The commercial department is the one who ensures that the payment terms and the delivery terms have been met and then processes the order from within the company.



2) Materials handling

Material handling is the movement of goods within the warehouse. It involves handling the material in such a way that the warehouse is able to process orders efficiently. Although it may sound a mundane task, it is an important one and an ongoing activity in any warehouse.



3) Warehousing :If we take the example of LG or Samsung, these are consumer durable companies which are present in multiple countries. Their manufacturing might be at one point, but the distribution is all across the world. Thus, warehousing plays a huge role and is one of the important Logistics activities.

The important point in warehousing is that the warehouse should be nearby to the dealer or the distributors' place and it should facilitate the easy delivery of goods. If there was a product which was from a branded company, but which takes 1 week to deliver, then this product might not move as much in the **market** as another product which is taking 2 days to deliver even though it is unbranded.

The location of warehouses also reduces the pressure on mother warehouse (large warehouses which stock most of the products). When there is a peak in **demand** or if there is a drop in production, these warehouses can take the pressure of deliveries and they can become interdependent to ensure delivery of goods to consumers.



Inventory control

If a firm has 100 units of a product in stock, but the demand is only of 10 units, then the company has uselessly invested in 90 units. This is money which can be used as a **working capital** and it is money on which banks are applying interest.



On the other hand, another firm had a demand of 500 units, but they have manufactured only 200 units thinking that demand will be less. Now they have lost the orders which is an **opportunity** cost. The perfect firm will be one, which has manufactured 100 units, knows there will be 50 units of demand and is ready even if demand doubles. But they are continuously monitoring the demand and are ready for it without investing much in manufacturing.

With the above example, you understood the importance of Inventory control in Logistics activities. Inventory management is one of the most important functions of logistics especially after the adoption of various production techniques such as Just in time manufacturing, **lean manufacturing** or other manufacturing processes where the cost of inventory management is brought down.

5- Transportation

Now we come to one of the major logistics activities which is one of the most resources heavy and revenue heavy segment of logistics. There is a single reason that transportation is costly – Fuel. Be it petrol, Diesel or gas, fuel is costly, and it is mostly consumed in transportation activities.



Transportation involves the physical delivery of goods from the company to the distributor or dealer and from the dealer to the end customer. Generally, companies are involved only till the point delivery happens to the distributor or the dealer. The distributor is then responsible for the delivery to the end customer. However, transportation is a cost to the dealer as well and reduces his profit – due to which the company has to give higher profits to the dealer – to negate his costs.

The better the warehousing and the inventory management of a company, the lower is the transportation cost for the company.

6) Packaging : There are two types of packaging – One which the customer sees on the shelf of supermarkets or hypermarkets where the package appears attractive and makes the customer buy the packages. The other is transport packaging where the products are packed in bulk so as to avoid any breakage or spillage and yet allow them to transfer huge volumes of the product safely from one place to another.



Packaging the product is a responsibility of the logistics team because otherwise the product will reach damaged to the end customer and this is a huge cost to the company.



What is inventory?

Inventory is: Those stocks or items used to support production (raw materials and work-in-process items), supporting activities (maintenance, repair, and operating supplies), and customer service (finished goods and spare parts)



Why does inventory exist ?

1- Raw materials and bought-out parts inventory will allow the organization to:

- ☐ Cater for the variability of supply.
- ☐ Take advantage of quantity discounts or market prices.
- ☐ Provide strategic stocks of items which could be in short supply due, for instance, to strikes or other supply problems.
- ☐ Guard against inflation.
- ☐ Form of investment when price increases are anticipated

Why does inventory exist ?

2- Work-in-progress inventory helps maintain the independence of stages in the process by decoupling the production steps involved. This leads to:

- ☐ **Greater flexibility in production scheduling especially at times of machine breakdown;**
- ☐ **Stabilizing the different output rates at each part in the process**
- ☐ **Improving the utilization of plant, processes and labour**

Why does inventory exist ?

3. Finished goods inventory with which the organization can:

- ☐ Provide off-the-shelf customer service.
- ☐ Achieve a steady supply of goods in the face of intermittent production or supply
- ☐ Cope with fluctuations in demand, particularly in the case of seasonal products
- ☐ Provide an insurance against plant or equipment breakdowns and, in some instances, against internal or suppliers' strikes



- Material management is an approach for planning, organizing, and controlling all those activities principally concerned with the flow of materials into an organization.
- The scope of Materials Management varies greatly from company to company and may include material planning and control, production planning, Purchasing, inventory control, in-plant materials movement, and waste management.



What is Materials Management?

- Coordinating function that balances the conflicting objectives of marketing, production, and finance by managing the flow of Materials.
- Balancing the Resources of the company with Customer Demand



Role of Materials Management

- Make the best use of company resources
- Provide the desired level of customer service (demand)



Purpose of Material Management

- To gain economy in purchasing
- To satisfy the demand during period of replenishment
- To carry reserve stock to avoid stock out
- To stabilize fluctuations in consumption
- To provide reasonable level of client services



Objective of material management

Primary

- Right price
- High turnover
- Low procurement & storage cost
- Continuity of supply
- Consistency in quality
- Good supplier relations
- Development of personnel
- Good information system

Secondary

- Forecasting
- Inter-departmental harmony
- Product improvement
- Standardization
- Make or buy decision
- New materials & products
- Favorable reciprocal relationships



Materials management functions

- Material planning and programming
- Purchasing and outsourcing
- Inventory control
- Storekeeping and warehousing
- Codification



1. Effective management & supervision

It depends on managerial functions of

- Planning
- Organizing
- Staffing
- Directing
- Controlling
- Reporting
- Budgeting



- 2.Sound purchasing methods
- 3.Skillful & hard poised negotiations
- 4.Effective purchase system
- 5.Should be simple
- 6.Must not increase other costs
- 7.Simple inventory control programme



1. Demand estimation
2. Identify the needed items
3. Calculate from the trends in Consumption during last 2 years.
4. Review with resource constraints



Advantages of material management

- Reduced operating costs and timely production.
- Greater job satisfaction on the part of both the workers and the employer.
- Every inch of the space is properly utilized.
- The issue of materials is also facilitated.
- It helps in maintaining effective production planning and control.



PMG 663

Project Risk & Supply Chain Risk



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