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Candidate Assessment Pack

**(international Diploma) Supply Chain Management**

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# Supply Chain Management Introduction

## Candidate Instructions

You must successfully complete and achieve all six tasks to successfully achieve the Level 5 Supply Chain Management (International) [OVH775]

Once you have completed and submitted your evidence your Assessor/Tutor will review your responses and provide you with feedback. They may give your assessment back to you and ask you to amend some of your answers if they do not meet the criteria. If this happens, your Assessor/Tutor will explain what you need to do. Once you have amended your answers, you will have to resubmit your assessment to your Assessor/Tutor.

A sample of your work may also be reviewed by an Internal Quality Assurance Verifier. Their role is not to assess your submission as this is the responsibility of the Assessor/Tutor. The reason for this sampling is to monitor the consistency and quality of the marking and feedback that you receive from your Assessor/Tutor

You may upload your submissions in either Word or PDF format. Please ensure that you reference your evidence submission accordingly to meet the criteria of this unit.

## Assessment Criteria

The following criteria will be used by your tutor when assessing your submission. The learner can:

1. Articulate the functions contained within a supply chain.
2. Determine supply chains appropriate to different types of goods.
3. Evaluate the features of such chains which make them mutually beneficial to supplier and customer.

2.1 Explain the impact of effective and efficient data exchange between customers and suppliers on supply chain productivity.

2.2 Summarise ways in which modern technologies have impacted on supply chain productivity.

2.3 Explain the tools and techniques that might be adopted within a supply chain improvement project.

2.4 Plan a project to improve the productivity of a supply chain

## Final Assessment Mark Scheme

**Final Assessment mark scheme: total mark for whole assignment = 100**

|  |  |
| --- | --- |
| **Grade boundaries** |  |
| Distinction | 80% |
| Merit | 65% |
| Pass | 50% |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Task | Total mark per assessment | Component marks within tasks. | | | | | | Total |
| 1 | 10 | A | 2 | B | 5 | C | 3 | 10 |
| 2 | 10 | A | 2 | B | 5 | C | 3 | 10 |
| 3 | 10 | part 1 | 5 | part 2 | 5 |  |  | 10 |
| 4 | 10 | A | 1 | B | 5 | C | 4 | 10 |
| 5a | 50 | A | 50 |  |  |  |  | 50 |
| 5b | 10 | A | 10 |  |  |  |  | 10 |
| total |  |  | 70 |  | 20 |  | 10 | 100 |

To achieve the unit the learners must have read the case study and then completed all 5 tasks below. They must ensure they are including information for each point within each task set out on each task document.

The learners must also demonstrate within their answers for the five tasks all the criteria within for the unit at least once.

# Case Study

Toasty is a small bakery that was established in 1980. It is a traditional family-run business that operates using a ‘middle person’ when they source their ingredients, so they do not have a direct link with suppliers. They must pay extra for using a wholesaler, but it does mean the company can purchase smaller quantities when needed; this would not be possible if they contracted directly with the supplier.

Over the last year or so Toasty has been having some issues in production because their ingredients aren’t being delivered on time - specifically the strong flour required to make their bread. The delivery is either late, or the wrong product is delivered. This halts production of the bread in the factory - leading to a knock-on effect in the shops when their stock is low or empty.

The company have contacted the wholesaler and they have accepted responsibility for the late deliveries. The wholesaler has suggested that the delivery problems have been due to several drivers they have hired recently who do not speak very good English and have trouble with traffic/road signs.

The wholesaler is also experiencing other problems such as vehicle breakdowns due to poor maintenance, and the wrong product being delivered due to inconsistent or lack of paperwork. Order taking is also an issue because there is a nearby bakery who also order from the wholesaler. This bakery is called Toast and Jam and their orders have been confused with Toasty’s

.

The problem with the wrong material being delivered, however, lies with the flour mill and is nothing to do with the wholesaler.

# Task 1 – Supply Chain Principles

Please ensure that you have read the case study before commencing this task.

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| A: Explain what is meant by a supply chain?  Total Marks = 2 |
| A supply chain is the network of interconnected processes, organizations, people, activities, and information involved in moving a product or service from its raw materials to the final consumer. It encompasses everything from sourcing and processing raw materials, manufacturing and assembling products, to warehousing, distribution, and delivery to the end customer.  In the context of Toasty's bakery:  Their supply chain starts with the flour mill, which supplies the strong flour.  The flour is then delivered to a wholesaler, who acts as a middleman and aggregates orders from multiple bakeries.  Toasty orders the flour from the wholesaler, who arranges for delivery to their bakery.  Finally, the flour is used in the production of bread, which is then distributed to Toasty's shops and sold to customers.  Therefore, Toasty's supply chain includes the flour mill, the wholesaler, their bakery, and their shops. The issues they are facing with late and inaccurate deliveries are disrupting the  smooth flow of materials and information within this chain. |
| B: Explain the functions that may be contained within a supply chain  **Total Marks = 5** |
| Toasty's case study highlights several key functions within a supply chain, even though theirs is facing some challenges. Here's a breakdown of the functions involved:  1. Planning & Forecasting:  Demand forecasting: Predicting future customer demand for products to guide production and inventory planning.  Sourcing: Identifying and selecting reliable suppliers for ingredients and equipment.  Procurement: Negotiating prices, placing orders, and managing supplier relationships.  2. Production & Operations:  Raw material management: Receiving, storing, and managing ingredients like flour, eggs, and milk.  Production planning & scheduling: Determining production schedules for different bread varieties based on demand forecasts.  Manufacturing: Baking the bread according to recipes and quality standards.  3. Logistics & Distribution:  Warehousing & storage: Storing finished bread products before delivery.  Transportation & delivery: Delivering bread to shops and retailers using appropriate vehicles and routes.  Inventory management: Maintaining optimal stock levels to avoid shortages or surplus.  4. Sales & Customer Service:  Order processing: Taking orders from shops and managing order fulfilment.  Delivery tracking & customer communication: Keeping track of deliveries and informing customers about any delays.  Returns & refunds: Handling any product returns or customer complaints related to deliveries or product quality.  5. Information Flow & Technology:  Demand & supply data management: Collecting and analysing data on customer demand, inventory levels, and supplier performance.  Communication & collaboration: Maintaining communication between different supply chain partners through emails, orders, and tracking systems.  Supply chain management software: Implementing technology to automate tasks, optimize processes, and improve visibility throughout the chain.  Toasty's Challenges:  The case study highlights issues impacting several of these functions:  Late deliveries and inaccurate orders impact logistics & distribution.  Confusion with another bakery affects order processing & customer service.  Flour quality issues involve sourcing & production.  By improving these functions, Toasty can optimize their supply chain for smoother operations and better customer satisfaction. |
| C: Describe supply chains that may be appropriate for the different types of goods within the case study: Total Marks = 3 |
| Toasty, a traditional bakery, uses different ingredients that require diverse supply chain approaches due to their varying characteristics and demand patterns. Here are potential supply chains for some key ingredients:  Strong Flour:  Direct Relationship with Mill: This offers greater control over quality, delivery times, and potential cost savings. However, it requires managing minimum order quantities and potentially higher upfront costs.  Hybrid Model: Combine direct contracts with the mill for large, predictable orders and use the wholesaler for smaller, occasional flour needs. This balances control with flexibility.  Other Ingredients (Dairy, Eggs, etc.):  Local Farmers Markets: Ideal for sourcing fresh, high-quality ingredients with minimal environmental impact. Requires frequent purchases and potential price fluctuations.  Specialty Food Distributors: Offers a wider range of ingredients with consistent quality and reliable delivery but likely at higher prices than local markets.  Wholesaler (limited use): Can be suitable for non-critical ingredients needed in smaller quantities, especially if Toasty negotiates better delivery terms and clearer order processing.  Additional Considerations:  Inventory Management: Implement a system to track stock levels and optimize ordering based on lead times and demand patterns.  Sustainability: Consider local and organic suppliers to align with potential customer preferences and environmental values.  Cost Analysis: Compare prices and minimum order quantities across different sourcing options to find the most cost-effective solutions.  By choosing appropriate supply chains for each ingredient, Toasty can ensure timely deliveries, maintain quality control, and potentially reduce costs. They should be flexible and adapt their approach based on ingredient characteristics, demand, and supplier performance. |

# Task 2 – Supply Chain Scenario

Please ensure that you have read the case study before commencing this task.

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| A: What do you think the advantages and disadvantages would be for not having a wholesaler involved in the supply chain process and instead, the company gets the ingredients directly from the supplier? Total mark = 2 one for advantage and one for disadvantage. |
| Advantages:   * Greater Control: Toasty would have direct control over quality, pricing, and delivery schedules, reducing reliance on the wholesaler's performance and potential delays. * Cost Savings: Eliminating the middleman can potentially lead to lower ingredient costs, especially for high-volume purchases. * Improved Relationships: Building direct relationships with suppliers can lead to better communication, collaboration, and customized solutions. * Transparency: Toasty gains full visibility into the supply chain, potentially enabling sourcing of sustainable or ethically sourced ingredients.   Disadvantages:   * Increased Complexity: Managing multiple suppliers, minimum order quantities, and logistics requires more internal resources and expertise. * Higher Entry Barriers: Minimum order quantities from direct suppliers might be higher than what Toasty currently purchases, impacting cash flow. * Risk of Dependence: Relying on a single supplier for critical ingredients increases vulnerability to disruptions or quality issues. * Loss of Flexibility: Wholesalers offer a diverse range of ingredients, which could be lost in a direct sourcing model. |
| **B:** Based on what you have read in the case study, read the options below and discuss in the space provided which option you feel would be the best for cost saving and efficiency and why? Discuss the advantages and disadvantages associated with your chosen option and briefly outline why you have not chosen the other two:  **Option A:**  Change the supplier of flour from the current choice to another one 20 miles further away, - keeping the same wholesaler.    **Option B:**  Stop using the wholesaler and change the supplier - cutting out the ‘middleman’ and getting the product direct from a new supplier.    **Option C:**  Do nothing. Continue to use the wholesaler and supplier, hope something improves soon. |
| **Option cost savings and efficiency and why? Total mark = 1**  Based on the case study, I believe Option B - stopping the wholesaler and directly sourcing from a new supplier offers the best potential for cost savings and efficiency for Toasty, with some caveats.  While direct sourcing presents challenges, the potential for cost savings, efficiency gains, and improved control over quality make it the most promising option for Toasty's long-term success. Careful supplier selection, resource allocation, and risk management can mitigate the challenges and pave the way for a more resilient and cost-effective supply chain. |
| Advantages and disadvantages associated with your chosen option: total mark = 2 one for advantage and one for disadvantage, (must not be the same as above)  Advantages of Option B:   * Cost Savings: Eliminating the middleman's mark-up can lead to significant cost reductions, especially for high-volume purchases of strong flour, a critical ingredient. * Improved Efficiency: Direct communication with the supplier facilitates smoother order processing, reduces delivery delays, and minimizes order mix-ups experienced with the current wholesaler. * Greater Control: Toasty can negotiate price, quality standards, and delivery schedules directly with the supplier, fostering a more proactive partnership. * Potential for Quality Improvement: Choosing a new supplier allows Toasty to explore other flour options, potentially with better quality or consistency than the current one.   Disadvantages of Option B:   * Increased Complexity: Direct sourcing requires managing logistics, minimum order quantities, and relationships with multiple suppliers, demanding more internal resources. * Finding a Reliable Supplier: Choosing a new supplier involves research, negotiations, and potential trial orders to ensure quality and reliability. * Risk of Dependence: Relying on a single source for flour increases vulnerability to disruptions or quality issues with that supplier. |
| Outline why you have not chosen the other two options: total marks = 2. One for each option explained.   * Option A: Changing flour suppliers while keeping the same wholesaler offers limited cost savings and doesn't address the issues with delivery delays or order mix-ups. * Option C: Doing nothing perpetuates the existing problems of unreliable deliveries, unclear communication, and potential cost inefficiency. It offers no improvement and puts Toasty's production and customer satisfaction at risk. |
| **C:** Evaluate the features of supply chains which make them mutually beneficial to supplier and customer. Total mark 3. |
| Evaluating Mutually Beneficial Features in Toasty's Supply Chain:  Based on the case study, Toasty's current supply chain lacks several features that would foster a mutually beneficial relationship with both the wholesaler and suppliers. Here's an evaluation of key missing features and their potential benefits:  1. Lack of Transparency and Clear Communication:  Current Issue: Toasty relies solely on the wholesaler for information, creating a communication gap with the flour mill and hindering proactive problem-solving.  Mutual Benefit: Open communication across the chain (Toasty, wholesaler, flour mill) would allow for:  Early identification of delivery issues at the mill (e.g., production delays) to inform Toasty and adjust orders.  Improved order accuracy by collaborating on clear product identification and paperwork to avoid mix-ups with "Toast and Jam."  2. Predictability and Reliability:  Current Issue: Late and inaccurate deliveries cause production disruptions and stockouts, compromising customer satisfaction and potential profits.  Mutual Benefit: Reliable delivery schedules established through collaborative planning would:  Ensure timely flour deliveries based on Toasty's production needs, minimizing downtime and waste.  Enhance the wholesaler's service reputation and attract more bakery customers.  3. Collaborative Planning and Forecasting:  Current Issue: Lack of demand forecasting with the mill contributes to potential flour shortages or overstocking at the wholesaler.  Mutual Benefit: Joint demand forecasting would allow:  Toasty to optimize inventory levels and avoid purchasing unnecessary flour from the wholesaler.  The flour mill to plan production runs efficiently, reducing waste and potential price fluctuations.  4. Flexibility and Adaptability:  Current Issue: Rigid dependence on the wholesaler limits Toasty's options to address delivery issues and flour problems at the mill.  Mutual Benefit: Exploring alternative flour suppliers or direct sourcing channels would provide:  Toasty with flexibility to switch to reliable suppliers in case of future disruptions.  The wholesaler with opportunities to improve service quality and retain Toasty's business.  5. Technology and Data Sharing:  Current Issue: Manual processes and limited data exchange hinder efficient tracking and problem-solving across the chain.  Mutual Benefit: Implementing digital tools for:  Order tracking and delivery monitoring could alert Toasty of potential delays and allow proactive adjustments.  Inventory management could optimize stock levels and minimize waste for both Toasty and the wholesaler.  Overall:  By actively working towards these features, Toasty can build a more collaborative and mutually beneficial supply chain. Clear communication, predictability, planning, flexibility, and technology adoption will not only improve operational efficiency and cost savings but also foster stronger relationships with suppliers and ultimately enhance customer satisfaction. |

# Task 3 – Supply Chain Data

Please ensure that you have read the case study before commencing this task.

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| A: Suggest ways in which improved data exchange between Toasty and its wholesaler might improve supply chain performance. Total marks 5 |
| Improved Data Exchange for Toasty's Supply Chain:  Toasty's current supply chain suffers from communication gaps and information silos, impacting performance. Improved data exchange with the wholesaler offers significant potential for optimization. Here are some suggestions:  1. Real-time Inventory Visibility:   * Implement a shared inventory management system allowing Toasty and the wholesaler to see stock levels in real-time. * This reduces order miscalculations, prevents stockouts, and enables the wholesaler to adjust deliveries based on Toasty's actual needs.   2. Demand Forecasting Collaboration:   * Share sales data and production plans to create joint demand forecasts for strong flour and other crucial ingredients. * This allows the wholesaler and potentially, the flour mill, to adjust production and stock levels proactively, meeting Toasty's demand efficiently.   3. Order Tracking and Delivery Monitoring:   * Integrate tracking systems to follow individual orders from placement to delivery, highlighting potential delays or misroutes. * This enables early intervention to rectify issues, minimizes downtime for Toasty, and helps the wholesaler identify areas for improvement.   4. Automated Order Processing and Confirmation:   * Implement electronic ordering systems with automatic confirmations and error checks to avoid order mix-ups with "Toast and Jam." * This minimizes human error, streamlines processing, and ensures accurate deliveries for both bakeries.   5. Performance Data Analysis and Feedback:   * Regularly share data on delivery times, order accuracy, and inventory levels to identify areas for improvement and track progress. * These fosters open communication, joint problem-solving, and continuous improvement in the supply chain relationship.   Additional Benefits:  Improved data exchange can lead to:   * Reduced administrative costs through automation and streamlined processes. * Enhanced customer satisfaction with consistent product availability. * Stronger supplier relationships built on trust and transparency. |
| B**: Explain the impact of effective and efficient data exchange between customers and suppliers on supply chain productivity. Total marks 5** |
| Impact of Effective Data Exchange on Supply Chain Productivity:  Efficient and effective data exchange between customers and suppliers plays a crucial role in boosting supply chain productivity in several ways:  **1. Improved Communication and Collaboration**   * **Impact**: Real-time data sharing (e.g. forecasts, orders, inventory levels) builds transparency and trust. * **Result**: Fewer misunderstandings, faster decision-making, better alignment on goals. * Example: A supplier can adjust production based on a customer's real-time sales data, reducing stockouts or overproduction.   **Reduced Lead Times**   * **Impact**: Faster access to demand and inventory data helps suppliers respond more quickly. * **Result**: Shorter order fulfillment cycles, quicker deliveries, and more agile operations.   **3. Optimized Inventory Levels**   * **Impact**: Accurate and timely data allows both parties to better plan inventory needs. * **Result**: Minimizes excess stock and avoids shortages, lowering storage costs and improving cash flow. * Example: A retailer sharing point-of-sale (POS) data helps suppliers deliver just-in-time shipments.   4. Stronger Supplier Relationships and Trust:   * Transparent data exchange and collaborative problem-solving builds trust and strengthens relationships between customers and suppliers. This fosters long-term partnerships and mutual benefit. * Open communication with the flour mill based on shared data could help Toasty negotiate better pricing or explore alternative flour options based on shared quality control data.   Challenges and Considerations:   * Implementing data exchange requires technological infrastructure and data security protocols. * Data standardization and compatibility across different systems can pose challenges. * Building trust and ensuring data privacy with suppliers is crucial.   **5. Cost Reduction**   * **Impact**: Fewer delays, improved planning, and reduced waste directly lower operational costs. * **Result**: Higher profitability for both customers and suppliers. |
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Task 4 – Supply Chain Technology

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| 1. **Look at supply chain diagram below and on it circle all the areas in the chain that might benefit from the application of modern technology, In terms of improved performance, quality, customer service or some other factor. Total = 1 mark**   **Supply Chain costings as at 2025**     * Mill efficiency: Upgrading milling technology could reduce flour costs and minimize waste. * Demand forecasting: Predicting bulk orders accurately optimizes dough preparation, reducing spoilage and cost. * Oven optimization: Automated temperature control and baking schedules improve consistency and energy efficiency. * Sustainable packaging: Biodegradable or reusable packaging reduces environmental impact and potentially appeals to customers. * Direct delivery: Bypassing wholesalers might cut transportation costs and offer fresher bread to retailers. * Interactive displays: QR codes linked to baking videos or nutritional information engage customers and enhance the buying experience.   These suggestions focus on various aspects beyond just cost, considering improvements in performance, quality, customer service, and sustainability. |
| 1. **Briefly describe how the application of technology could have an effect on the costs of the various steps you have just circled. Total mark = 5**   **Learners must be able to give a full explanation of the type of technology that could be used and an explanation on what the effect on the costs is for each of the steps they have circled. i.e., initial outlay and when the organisation would see a return on the investment.**  **The learner should be able to identify at least two areas to do this for.**  Cost Effects of Technology in Toasty's Supply Chain:  Based on the circled areas, let's explore how technology could impact costs in two key steps:  1. Wheat Harvest and Milling:   * Technology: Precision agriculture sensors and automated harvesting/milling equipment. * Cost Effects: * Initial Outlay: High upfront investment for sensor network and equipment implementation. * Cost Reduction: * Improved crop yields and resource use (water, fertilizer) lead to lower input costs. * Automated equipment reduces labour costs and minimizes wastage. * Return on Investment (ROI): * Long-term savings based on reduced costs and potentially higher yields. * Payback period depends on initial investment, yield improvement, and cost savings.   2. Wholesaler Delivery to Bakery:   * Technology: Transportation Management System (TMS) and telematics for trucks. * Cost Effects: * Initial Outlay: Software subscription and potential hardware installation in trucks. * Cost Reduction: * TMS optimizes delivery routes, minimizing fuel consumption and mileage costs. * Telematics allows real-time tracking, reducing delays and improving efficiency. * ROI: * Quickest payback potential due to direct fuel and driver time savings.   Overall:  While initial technology investments might be significant, the long-term cost savings and efficiency gains offered by these technologies can be substantial. Toasty should analyse the specific costs and potential benefits of each technology to determine the optimal ROI timeframe and prioritize implementation based on their budget and needs. |
| 1. **Summarise ways in which modern technologies have impacted on supply chain productivity. Total mark = 4**   Learners need to be able to demonstrate an understanding of how technology can help organisations, i.e., by enabling supply chain software to become faster and more efficient. With technology, through warehouse and transport systems, businesses are able to provide data-capture, improve labour management, monitor resource and reduce stock losses with real time stock checking.  Modern technologies have revolutionized supply chain productivity in several key ways:  1. Enhanced Visibility and Transparency:   * Real-time tracking of shipments, inventory levels, and production stages using digital tools (ERP, WMS) allows for proactive problem-solving, minimizing disruptions and waste. * Data-driven insights reveal inefficiencies and bottlenecks, enabling targeted improvements and optimized decision-making.   2. Improved Efficiency and Automation:   * Warehouse automation solutions (robots, automated guided vehicles) reduce manual labour needs, increase throughput, and minimize errors. * Automated data capture through sensors and RFID tags eliminates manual data entry, improves accuracy, and accelerates processes. * Transportation management systems (TMS) optimize delivery routes, reduce fuel consumption, and improve delivery times.   3. Optimized Inventory Management:   * Advanced forecasting and demand planning software helps predict customer needs and maintain optimal stock levels, minimizing storage costs and the risk of stockouts. * Smart shelves in retail stores track inventory in real-time, automatically trigger restocking orders, and prevent lost sales.   4. Enhanced Collaboration and Communication:   * Cloud-based platforms facilitate seamless communication and data sharing between different supply chain partners (suppliers, manufacturers, distributors, retailers). * Collaborative planning, forecasting, and replenishment (CPFR) systems enable joint optimization and improve supply chain agility.   5. Reduced Costs and Waste:   * Improved efficiency and optimized processes lead to cost savings across the supply chain, including transportation, storage, and labour. * Real-time tracking and forecasting minimize overstocking and waste, promoting sustainability and resource conservation.   Overall, modern technologies act as powerful tools for boosting supply chain productivity by enhancing visibility, streamlining operations, optimizing inventory, fostering collaboration, and ultimately reducing costs and waste. |

# Task 5a – Supply Chain Improvement Project

You must create a project plan to improve the productivity of a supply chain, it must include staff training to improve performance with a minimum of one function of the supply chain where improved training will have a positive impact. You must explain the tools and techniques that you would adopt within the supply chain improvement project.

The project must include appropriate success criteria so improvements can be identified and measured and a tracking process to measure success. Please refer to the supply chain diagram and the costings where necessary.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project plan: total mark = 50**  Plan a project. The project must include staff training to improve performance with a minimum of one function of the supply chain where improved training will have a positive impact. The project must include appropriate success criteria so improvements can be identified and measured and a tracking process to measure success. (the learner must refer to the supply chain diagram and the costings where necessary).  **Learner must include elements of a project plan including.**   * Outline of business justification and stakeholder needs. ... * List of requirements and **project** objectives. ... * **Project** scope statement. ... * List of deliverables and estimated due dates. ... * Detailed **project schedule**. ... * Risk assessment and management **plan**. ... * Defined roles and responsibilities   Our company ‘Pleasantries’ is a scented candles manufacturing organisation.  Problem: Rising demand threatens pleasantries’ quality due to inconsistent scent strength, burn times, and appearance, inefficient processes, and high material waste.  DMAIC:    Define:  Train staff to boost efficiency and quality, achieving:   * 5% reduction in production variations (scent, burn, aesthetics) within 3 months. * 10% faster average production time per candle in 2 months. * 5% less material waste within 3 months.   Measure:   * Track scent strength, burn time, and aesthetic deviations. * Monitor production times per stage and calculate average per candle. * Quantify material usage and waste percentage.   Analysis:   * Pre-training assessment: Observe processes, interview staff, and analyze data to identify improvement areas. * Root cause analysis: Determine key factors causing inconsistencies, inefficiencies, and waste. * Training needs identification: Tailor training content based on identified skill gaps and knowledge deficiencies.   Improve:   * Shadowing: Learn best practices from experienced colleagues. * Practical skills: Hands-on training in wax prep, fragrance blending, pouring, and quality control. * Feedback and coaching: Continuous guidance to ensure proper technique and address errors. * Job rotation: Gain versatility and cross-functional understanding. * Workshops: Industry experts deliver sessions on candle science, quality control, and optimization. * Online modules: Learn about material handling, safety, and sustainability. * Visual aids: Flowcharts, checklists, and reference materials for knowledge retention and application. * Group discussions: Encourage open communication and collaborative problem-solving.   Control:   * Business Justification: Link efficiency improvements to financial benefits and stakeholder interests (employee satisfaction, customer loyalty, etc.). * Project Scope: Clearly define boundaries and activities. * Deliverables and Due Dates: Specify tangible outcomes and deadlines. * Detailed Schedule: Map out activities, resource allocation, and milestones. * Risk Management: Identify and mitigate potential risks like trainer availability or employee resistance. * Defined Roles: Assign clear responsibilities for project management, training delivery, performance monitoring, and reporting.   The levels are as follows: -  1.Beginners  2. Intermediate  3. Average  4. Expert  5. Advanced   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Sl.NO | GENDER | NAME | PHONE NUMBER | ADDRESS | LICENCE NO | VEHICLE NO | DRIVING SKILL | SOFT SKILL | TECHNICAL SKILL | READING & WRITING SKILL | | 1 | MALE | Lokesh | x | x | x | x | 4 | 3 | 4 | 3 | | 2 | MALE | Parveen Kumar b | x | x | x | x | 5 | 4 | 5 | 3 | | 3 | FEMALE | Agalya | x | x | x | x | 4 | 3 | 4 | 4 | | 4 | MALE | Kapil | x | x | x | x | 5 | 3 | 5 | 4 | | 5 | FEMALE | Divya | x | x | x | x | 4 | 4 | 5 | 4 | | 6 | MALE | surya | x | x | x | x | 4 | 4 | 4 | 3 | | 7 | MALE | Lithish | x | x | x | x | 5 | 3 | 3 | 4 | | 8 | MALE | ganesh | x | x | x | x | 3 | 4 | 3 | 4 | | 9 | MALE | Gowtham | x | x | x | x | 4 | 3 | 4 | 3 | | 10 | MALE | Thara | x | x | x | x | 5 | 3 | 5 | 4 | |

# Task 5b – Supply Chain Improvement Project

You must complete the project charter on the next page. You must clearly outline the aims and how you will identify if there has been an improvement. Where you are unable to fill in a box in the project charter, you must suggest tools and techniques you could use to obtain the information you need.

**Total mark = 10 learner must have completed all parts of the project charter with the correct information from their project plan, to achieve all 10 marks.**

Project Aim: Enhance production efficiency and product quality through targeted staff training, achieving:

* Reduced production variations: Consistent scent strength, burn times, and aesthetics within 5% of target in 3 months. (Measured via quality control checkpoints)
* Improved process efficiency: 10% decrease in average production time per candle within 2 months. (Monitored through production stage timing)
* Minimized waste: 5% reduction in material waste (wax, fragrance oils, etc.) within 3 months. (Quantified by tracking material usage and discarded materials)

Success Identification:

* Reduction in variance metrics: Trend analysis showing sustained decrease in scent, burn, and aesthetic deviations.
* Increased average production speed: Consistent improvement in overall production time per candle.
* Lower waste percentage: Demonstrated decrease in material usage and discarded materials.
* Positive employee feedback: Surveys indicating improved confidence, efficiency, and reduced errors.

Project Deliverables:

* Optimized production procedures and training materials.
* Data visualizations and reports tracking progress towards defined goals.
* Improved product quality, customer satisfaction, and brand reputation.

Chart

Description automatically generated

More production, More income, Customer Satisfaction

More income, Good Transportation

Proper training,

Monitoring

Production

To achieve the target and improvement

Low stocks, Low production, Lack of training

Improvement in service, Gain in production

Maintain Your Stocks, Need Proper Service

Training cost,

Maintenance team,

Manufacturing staffs

Lokesh L



8/9/2025

1. Lokesh L
2. Kapil

On time delivery

Customer Satisfaction

Quality and service

1/9/2025

CSE

CP08

Lokesh L

Bakery Production