Volunteers National Organization for Development and Humanities Services

منظمة المتطوعين الوطنية للتنمية والخدمات الإنسانية

(VOLUNTEERS)

VOLUNTYEERS WAREHOUSE & INVENTORY MANAGEMENT POLICY

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Definition

A simple definition of a warehouse is:

'A warehouse is a planned space for the storage and handling of goods and material.

In general, warehouses are focal points for product and information flow between sources of supply and beneficiaries. However, in humanitarian supply chains, warehouses vary greatly in terms of their role and their characteristics.

Global Warehouses

The global warehousing concept has gained popularity over the last decade as stock pre-positioning becomes one of the strategies for ensuring a timely response to emergencies. They are usually purpose built or purpose designed facilities operated by permanent staff that has been trained in all the skills necessary to run an efficient facility or utilizing third party logistics (3PL) staff and facilities. For such operations, organizations use, information systems that are computer based, with sophisticated software to help in the planning and management of the warehouse. The operating situation is

relatively stable and management attention is focused on the efficient and cost effective running of the warehouse operation. Numerous organizations have centralized prepositioning units strategically located globally. Some of these offer extended services to other humanitarian organizations on a cost plus operating charges basis. The United Nations Humanitarian Response Depot (UNHRD) Network.

Field Warehouses

Field Warehouses are usually temporary in nature. They may be housed in a building which was not designed to be used as a warehouse, in a temporary building/structures, and are often in mobile units (rub halls) that are little more than a tent in a field. The initial staff may be a casual workforce that has never worked in a warehouse before and the inventory system is more likely to be paper based. Often the situation is initially chaotic, sometimes dangerous and coupled with a humanitarian need which may be very urgent. The management style must therefore be practical and action oriented with a focus on making the humanitarian goods available as quickly and efficiently as possible, while being accountable at the same time.

Policies and Procedures

Policies

The policies contain hard and fast rules and regulations that define the general conduct of the warehouse operation. Examples of the types of policies that organizations will define are as follows:

Organizational specific warehouse management policy and procedures guideline . outline health and outline Health safety human resources management security pest control

1. Organization Specific Wheelhouse Management policy and procedures guideline
2. warehouse maintenance and cleaning.
3. Quality Control.
4. record keeping and reporting reverse logistics – Return of goods and exit strategy in the event of downscaling or shutting down operations disposal of obsolete and damaged goods.

Procedures

The procedures' document defines step by step how the activities in the warehouse should be carried out and clearly defines the processes to be adopted. These can be adopted as 'best practice'.

The procedures provide visibility of the operations for managers and donors.

However, in creating such procedures, care must be taken to avoid constraining the use of local initiative which might be required to deal with local conditions. Procedures should be considered as streamlining the business processes and providing checks and balances. They provide guidance to warehouse managers and must have some level of flexibility to cater to unique situations. This can be achieved by limiting the level of detail that the procedures document defines, allowing more flexibility and/or by arranging 'dispensations' to allow departure from the procedures in order to optimize local performance, especially in emergencies.

The procedures will normally provide the step by step guidance on how to manage each aspect of warehousing and may cover:

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1. receiving and issuing of supplies;
2. quality control or verification;
3. storage of goods; how to control stock movement (stock control);
4. documentation flow; how to detect and deal with stock losses;
5. how rejected material will be managed;
6. and how to deal with unwanted material, obsolete and scrap, disposal.

See also a Warehouse Rental Contract sample.

Types of Warehouse Space

1. Commercial: in rented building used for business.
2. Government or state: such as at the ports or harbours. This is common in emergency situations.
3. Transit: for temporary storage of goods destined for different locations and need storage for a very short time.
4. Bonded warehouses: for storage of goods whose duty is unpaid and especially where the goods are destined to another country. Pre-positioned stock is often held in bonded warehouses so that export is quick and can sometimes be stored for long periods.
5. Open storage: not ideal for perishable products but in emergencies, sometimes the only alternative.
6. Space that is owned and managed by the organization.
7. Pre-fabricated warehouses where there are no permanent structures available. This is common practice in emergencies.

Basic Principles of Warehouse and Inventory Management

1. Planning inbound receipt procedures.
2. Storage formalities e.g:
3. Location Management.
4. Occupational Health and Safety.
5. Outbound delivery procedures

How to Select and Set-Up a Warehouse

Determining Needs

In determining needs, one should look beyond the basic need of a warehouse to store things. Whilst, this is correct there are also other considerations.

1. the volume of goods;
2. speed of through-put required;
3. as a transit point;
4. breaking bulk location;
5. an area for sorting and consolidating different goods;
6. to enhance the speed of the response; to protect and account for inventor; and as a buffer in the event of a break-down or delay in the supply pipeline.

Determining Storage Requirements

Selecting a Suitable Location

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There are a range of factors to consider when deciding on the location of a new warehouse facility and these may vary depending on whether you are selecting a location for a temporary building or selecting from one of a number of existing buildings.

These may include:

1. proximity to ports of entry and beneficiaries
2. existing buildings
3. security
4. the context
5. site condition
6. access.
7. service.
8. Land size available.
9. purpose of warehouse.
10. previous use of the facility.
11. floor weight.
12. access to labour

Warehouse Selection

Factors to consider:

1. nature and characteristics of goods to be stored;
2. nature of handling equipment available;
3. duration of storage needed i.e. short term or long term;
4. the need for other activities, e.g. repackaging, labelling, kitting, etc;
5. access and parking for vehicles; number of loading docks required;
6. and secure compound.

Warehouse Preparation Planning

Space layout

The areas that should be planned are both the general storage areas and the areas for goods receipt, consignment picking and goods dispatch. It is also desirable that space should be set aside for the following activities:

1. equipment maintenance and parking;
2. charging of equipment batteries such as pallet trucks;
3. refueling of trucks;
4. an area for garbage disposal e.g. empty packaging;
5. a quarantine area for keeping rejected goods, goods to be sent back or destroyed;
6. an employee rest area; washroom; and an administration office.

Planning

It is worth keeping these requirements in mind during the planning of the main operating areas. Planning consideration needs to be given to the following:

1. allocate space for each type of goods and locating number;

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2. allow sufficient space for easy access to the stacks for inspecting, loading and unloading. Stacks should be one meter from the walls and another meter between stacks;
3. sizing the goods receipt and dispatch area;
4. allow space for storage of cleaning materials and supplies;
5. allocate areas for damaged items by consignment number;
6. allow sufficient space to repackage damaged items and place it in separate stacks;
7. sufficient free space is needed to operate a warehouse effectively. When planning the size of a warehouse consider:
    - planning on having about 70-80% utilization of available space, whilst considering:

1. throughput rate number of stock keeping units (SKU)
2. handling characteristics of items, etc. See Stacking guide in the Annexes.

How to calculate warehouse storage space.

Special storage needs

Some relief items require special attention in terms of the type and security of the storage area. For example:

1. Medical supplies and drug shipments can contain a large number of small, highly-valued and, often, restricted items, many with a limited shelf-life. Thus, a secure area is required, as well as judicious attention to expiry dates.
2. Hazardous products such as fuels, compressed gases, insecticides, alcohol, ether and other flammable, toxic or corrosive substances must be stored separately, preferably in a cool, secure shed in the compound but outside the main warehouse.
3. Antibiotics and vaccines may require temperature-controlled cold storage arrangements, with sufficient capacity and a reliable, as well as a backup, power source.
4. With combustible items, such as alcohol and ether, specific attention is required when storing and handling. Inventory management techniques need to be implemented to prevent wasteful surpluses and to ensure proper stock rotation to avoid costly losses due to expired goods. Procedures for controlling, preserving and releasing medical supplies and drugs should be established consultation with the medical experts.

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Space utilization and handling

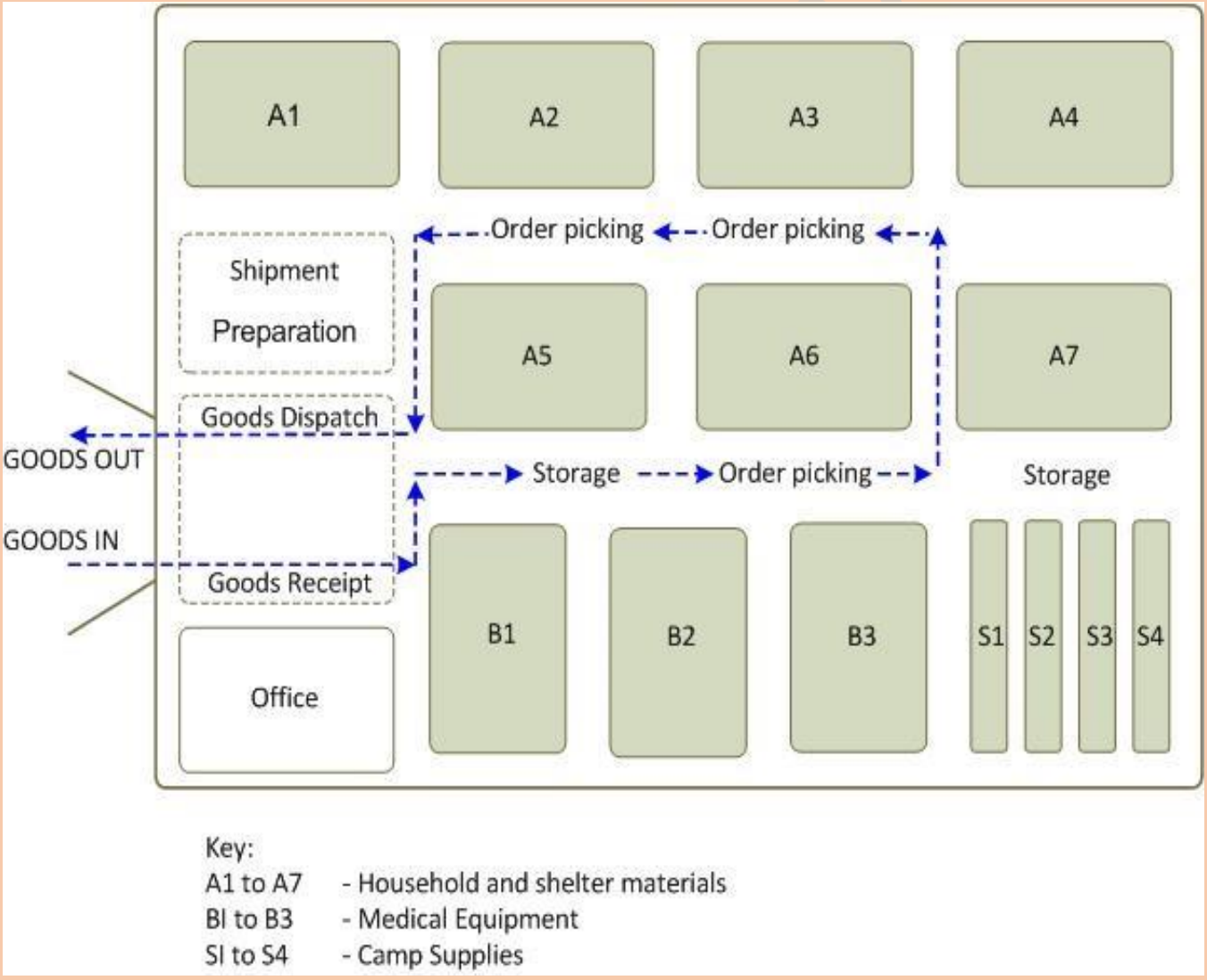

Diagram 1: Space utilization

As shown above, the warehouse operation is composed of four key work activities:

1. goods receipt
2. storage

3. picking goods dispatch

To estimate the resource requirement for the whole warehouse, one should start by estimating the requirements for each of the key work activities in turn and the level of demand. Then, the resource requirements for all activities should be combined together, taking into account the way that the activities are phased during the working day, in order to make an estimate of the total resources required.

Aspects to consider when managing Warehouse Operations

1. planning the workload
2. allocating resources
3. space utilization & handling, (see the diagram above):
4. receiving goods;
5. storing goods.
6. assembling consignments
7. dispatching consignments
8. disposal of goods
9. pest control
10. security
11. inventory management
12. handling and stacking techniques
13. occupational health and safety

Managing Inventory Levels

It has been established that the role of inventory management is to ensure that stock is available to meet the needs of the beneficiaries as and when required.

Inventory represents a large cost to the humanitarian supply chain. This is made up of the cost of the inventory itself, plus the cost of transporting the goods, cost of managing the goods (labor, fumigation, repackaging, etc) and keeping the goods in warehouses. The inventory manager's job is to make inventory available at the lowest possible cost.

In order to achieve this, the inventory manager must ensure a balance between supply and demand by establishing minimum holding stocks to cover lead-times. To achieve this, the inventory manager must constantly liaise with the programs to keep abreast of changing needs and priorities. The warehouse must always have sufficient stocks to cover the lead-time for replacement stocks to avoid stock-outs.

Inventory Control

There are two methods of inventory control that are applicable to emergency situations:

1. reorder level policy
2. reorder cycle policy.

Both are applicable to humanitarian situations and have associated pros and cons. Note that economic order quantity (EOQ) in practice only works in a fairly stable environment where demand variability and replenishment lead-time are reasonably stable and predictable. This is not the case in an emergency.

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Economic order quantity is applicable in more stable environments such as refugee camps and perhaps later in a relief/recovery phase.

Inventory management in an emergency is more 'project based', matching supply with demand in a rapidly changing environment. This requires building a supply chain that has a high level of flexibility and adaptability, with rapid identification of need and rapid fulfilment of that need through the supply chain.

In managing this sort of system, inventory should be considered in relatively small quantities (inventory packages of associated relief items) that are attached (pegged) to an identified need then moved (and tracked) through from source to the identified need (the user).

Optimization comes from having logistics systems that can configure, procure and consolidate these packages quickly and a distribution chain that is flexible and can adapt to changing requirements quickly and at least cost.

Information systems that facilitate transparency of the supply chain inventory levels, location, and demand provide the necessary visibility to facilitate good planning and effective decisions that maximise services and reduce costs.

Stock control and movements

The warehouse/inventory manager is responsible for monitoring the movement of goods as they are transported from the supplier and for the control of stock movement in the warehouse facility.

The vital stock control measurements include:

1. establish levels of operating stocks based on consumption/rate of usage. The stock levels shall be reviewed from time to time depending on current needs. (See "Inventory control above);
2. ensure that weekly and monthly stock balances report of each stock item and the total value are prepared;
3. maintain monthly stock usage report of each item kept in the store and the overall in the usage trend in last six months;
4. review and report on six monthly bases slow moving items indicating the last movement date the unit value and total value and liaise with user department;
5. establish quantity, lead -time and availability of each item supplied on the market;
6. keep a record of all non- stock items received from suppliers, returned to suppliers and issued out to users.

Monitoring Goods in Transit

1. order lead time
2. tracking orders for goods
3. controlling stock movements:
4. establishing minimum stock levels and monitoring the same;
5. goods receipt quality inspections;
6. physical stock control in the warehouse;
7. controlling Specialized Items;
8. and releasing stock from storage and goods dispatch.

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To facilitate and account for movement of stocks the following documents could be used:

1. delivery notes or waybill samples and or packing list samples and; 2
2. goods received notes, see several samples, , , and ; 1 2 3 4
3. stock card;
4. bin card;
5. and consignment notes.

See in the Annexes the warehouse flow chart.

Stock Records – Documentation

1. stock identification
2. stack cards, see samples and. 1 2
3. bin cards
4. stock Checks: see inventory section for different samples or in the Annexes
5. stock loss reporting
6. reporting of stock levels

Resource Requirements

In addition to the work methods, equipment and space requirements it is essential that the warehouse is adequately resourced. This is done by planning or estimating the requirements for people and equipment in order to operate the warehouse facility.

There is a trade-off to be made between the people and handling equipment requirements for any given workload.

In global warehouse operations, which are run like commercial operations, the focus is on minimizing the cost of running the operation. In this situation, it is often better to invest in handling equipment and reduce the dependence on people resources.

However, in field operations, many humanitarian organizations prefer to hire local labor which provides employment instead of relying on handling equipment.

The requirement for the total amount of resources required will be determined by the amount of goods flowing into and out of the warehouse, as shown in the diagram below.

Basic Warehouse Equipment

Various types of equipment are required to ensure the smooth execution of work in a warehouse. All equipment should be properly stored when not in use and a regular maintenance schedule posted. Warehouse staff should be trained in standard daily maintenance practices and the correct use of equipment. Where necessary, they should be equipped with personal safety equipment such as work gloves, work boots, goggles, etc.

Required equipment may include:

1. sufficient quantities of standard forms, calculators and stationery to keep proper storage records;

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2. small tools for opening cases, such as hammers, pliers, crowbars, steel cutters;
3. tools and materials for store repair and simple maintenance;
4. supplies for reconditioning damaged packaging, such as bags, needles, twine, oil containers, stitching machine, strapping machine, adhesive tape and small containers or cartons;
5. a sampling spear for inspecting foodstuffs;
6. scales for weighing goods; standard wooden pallets in sufficient numbers – ideally international;
7. standardization organization's "Euro" type (120 × 80cm);
8. two-wheel hand trolleys for moving supplies within the warehouse;
9. a pallet-jack to move pallets;
10. a forklift where pallets are to be loaded and offloaded from trucks;
11. brooms, dust pans, brushes, shovels, sieves, refuse bins for cleaning and disposing of collected waste;
12. first aid kits, flashlights, fire extinguishers and other fire-fighting equipment both inside and outside the warehouse;
13. weighing scales; and ladders.

Care of Warehouse equipment

Warehouse equipment is maintained to prevent accidents and breakdowns from occurring.

Maintenance activities consist of inspections, regular servicing and monitoring performance for failure trends, as this will enable symptoms to be recognized before failure occurs.

Equipment maintenance has a strong health and safety bias. Often health and safety legislation will impose on management an obligation for safe systems of work. Ensuring safe policies and procedures of work will require an examination of men, machinery, methods, materials and environmental aspects.

Some areas to pay attention to:

1. planned maintenance
2. maintain equipment
3. maintain building
4. completion of maintenance records

Legal Considerations

Leasing Temporary Warehouses/Contracting.

The common practice in emergencies is to lease or rent, not purchase warehouses. In this situation, there is often a shortage of suitable buildings or locations for warehouse space and this can often cause the costs to increase significantly. Therefore, it is often necessary to utilize temporary warehouse space for as short a time a possible.

Care must be taken with the drawing up of the lease agreement (See Warehouse Rental Contract sample) with the owner. The following items are basic inclusions and in a lease agreement:

1. the cost for the lease;
2. the duration of the lease agreement;

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3. exit clause: the period of notice required for terminating or extending the lease period. Confirmation of the existence of property insurance, covering third-party, fire, water damage, window breakage, etc;
4. details of any security arrangements;
5. a detailed inventory of any equipment, fixtures and fitting included with the building and detailed description of their condition; confirmation of either sole tenancy or details of other tenants;
6. information about the ground or floor strength per square meter;
7. the weight capacity of any equipment such as forklifts, racks and shelves;
8. in situations where neutrality is important, care must be taken to establish the actual owner of the building, which might be different from the 'lessor' of the building e.g. the military, religious groups or government force majeure;
9. indemnity;
10. and insurance.

Conclusion

The warehouse is a key component of the supply chain in emergencies. It buffers uncertainties and breakdowns that may occur in the supply chain. When properly managed and appropriately stocked a warehouse provides a consistent supply of material when it is needed

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