Checklist

It is a list with previously defined options that are used as a guide to control risks.

It allows a thorough evaluation in a short period of time.

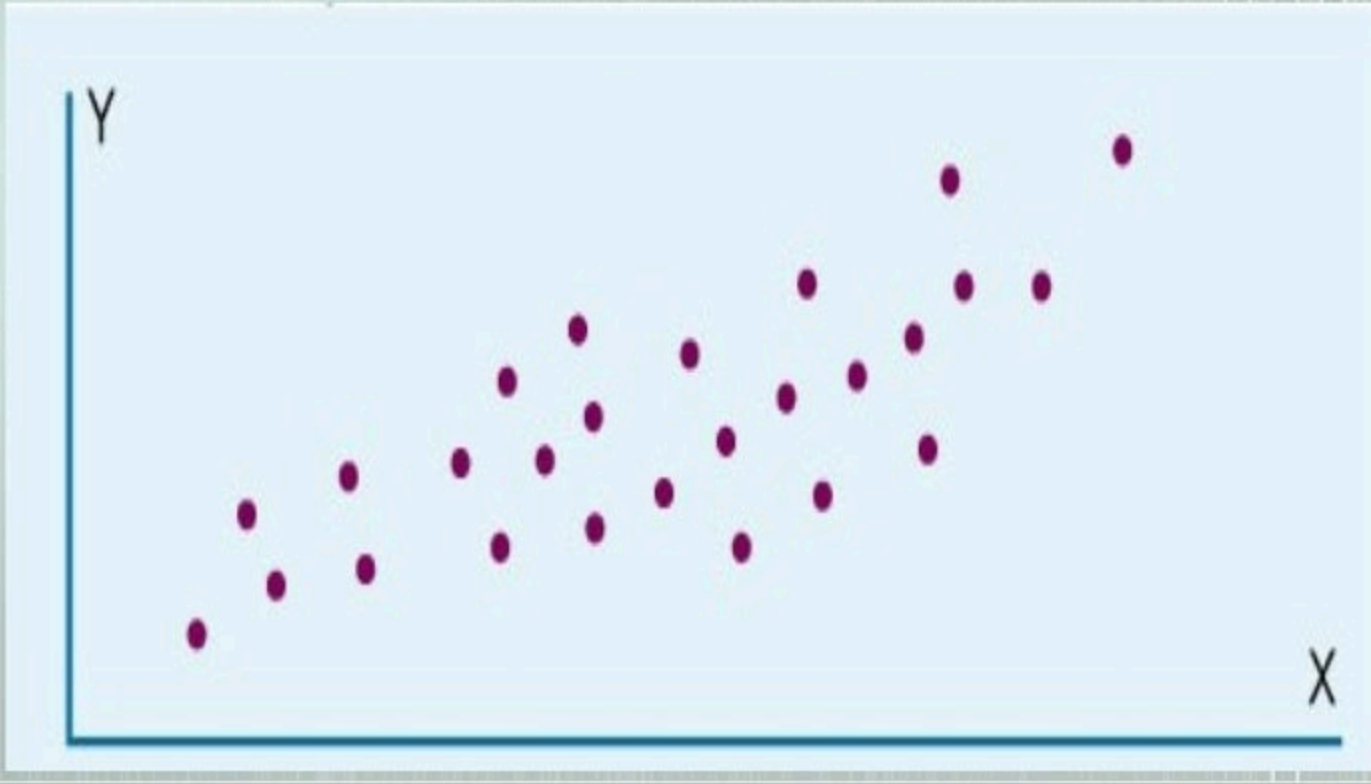
Checklist

- **Simple data check-off sheet designed to identify type of quality problems at each work station; per shift, per machine, per operator**

Defect Type	No. of Defects	Total
Broken zipper	✓✓✓	3
Ripped material	✓✓✓✓✓✓✓	7
Missing buttons	✓✓✓	3
Faded color	✓✓	2

Scatter Diagrams

- A graph that shows how two variables are related to one another
- Data can be used in a regression analysis to establish equation for the relationship
- Scatter Diagrams are used to study and identify the possible relationship between the changes observed in two different sets of variables.



Aggregate Production Planning

Objective

- To generate a medium-term production plan
- To establish rough product mix
- To anticipate bottlenecks
- To align capacity and workforce plans.

It is usually done for next 2 to12 months.

Demand changes over a period of time at a faster rate than the resources. Aggregate planning offers strategies to absorb these fluctuations.

Guidelines for Aggregate Planning

- Determine demand for each period
- Consider company policies that may have an impact
- Determine capacities for each period
  - Regular time, overtime, subcontracting, etc.
- Identify back-order or inventory amount
- Determine costs of operation
- Continue through time horizon to calculate total cost
- Develop alternate plans and compute cost for each
- Select the plan that meets objectives

Strategies in Aggregate Planning

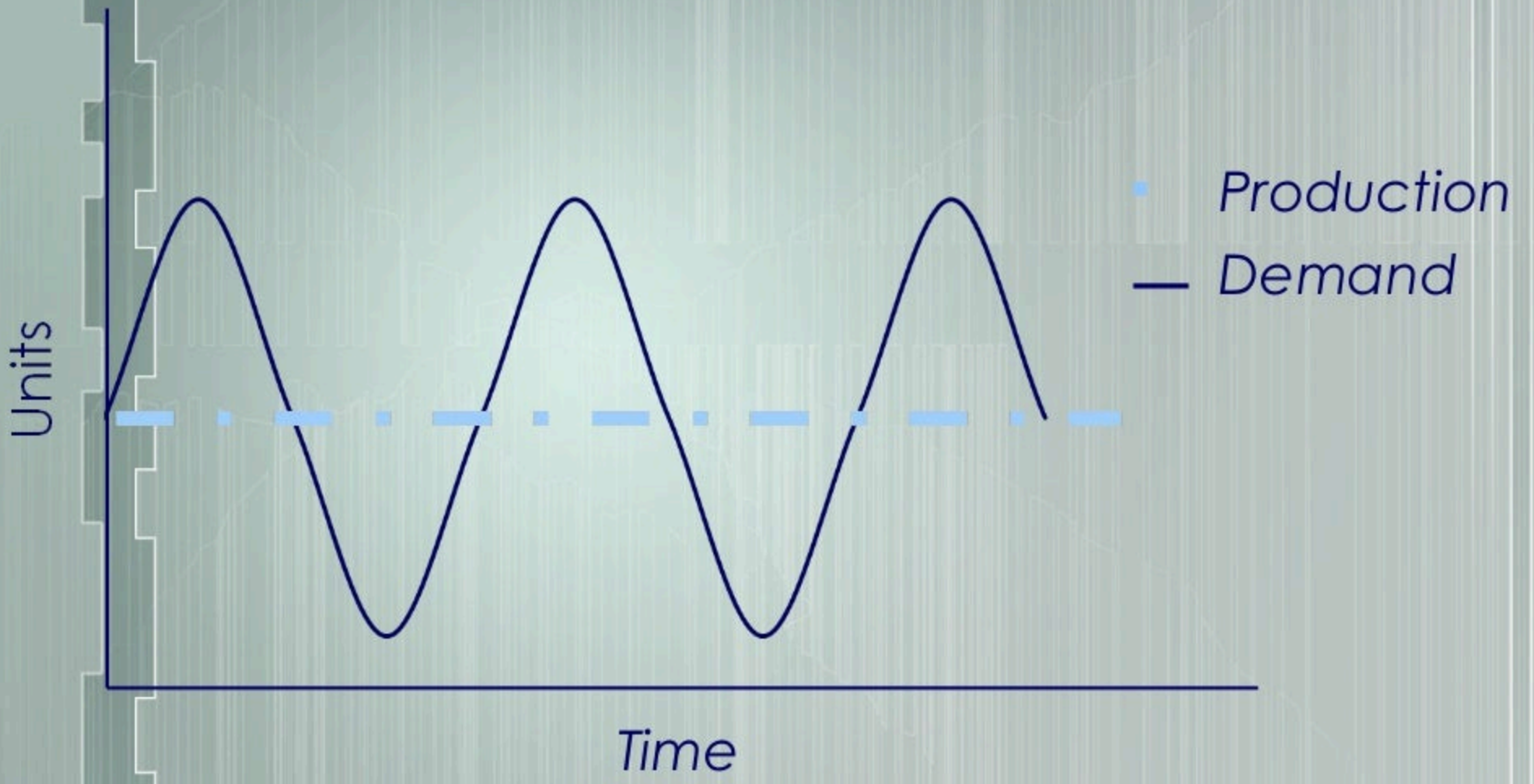
Level plans

- Use a constant workforce & produce similar quantities each time period
- Use inventories and backorders to absorb demand peaks & valleys

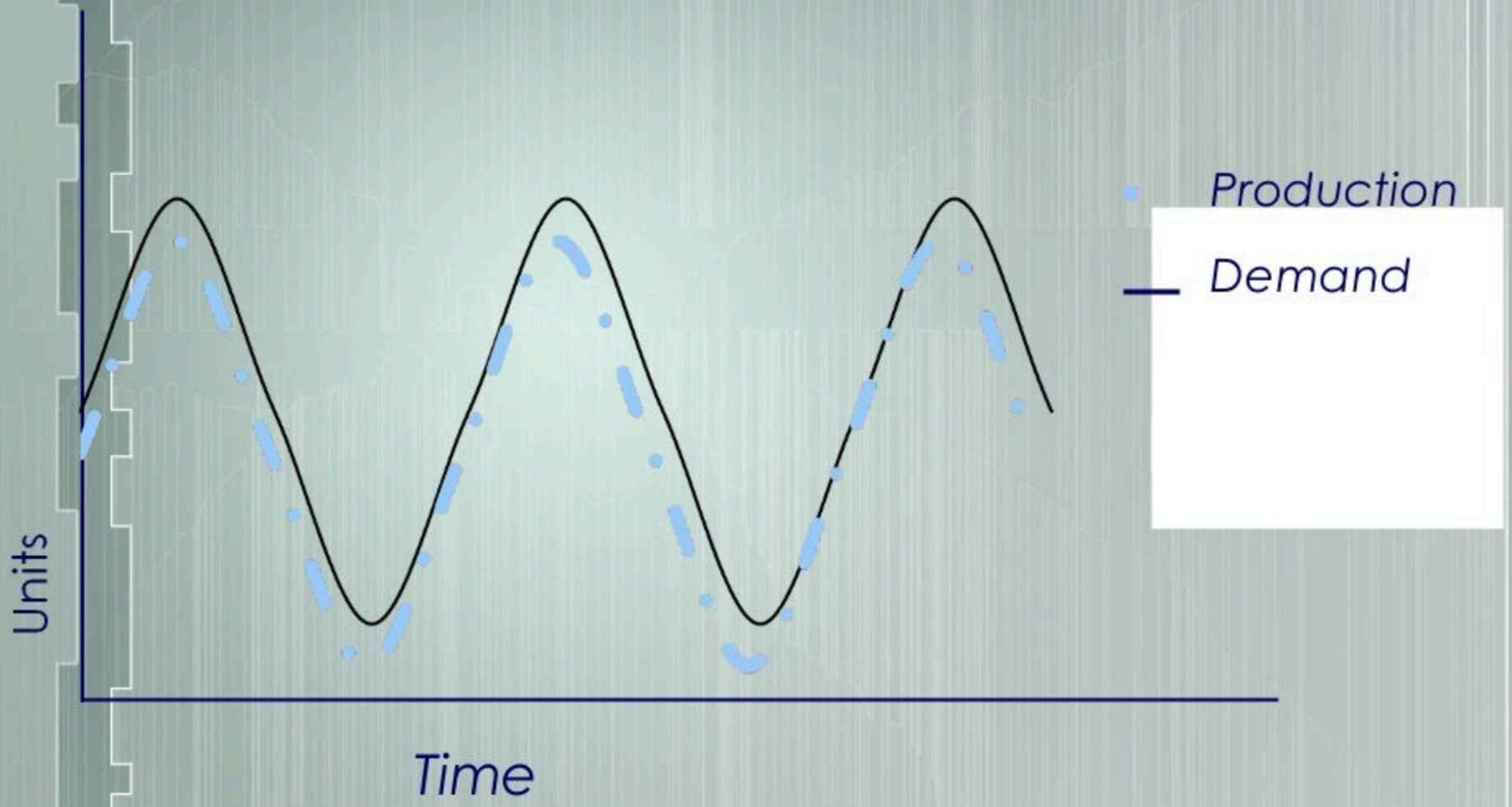
Chase plans

Minimize finished good inventories by trying to keep pace with demand fluctuations

Level plans



Chase plans



Hybrid or Mixed Strategies

- Build-up inventory ahead of rising demand and use backorders to level extreme peaks
- Layoff or furlough workers during low demand
- Subcontract production or hire temporary workers to cover short-term peaks
- Reassign workers to preventive maintenance during low demand
- Influencing Demand

Materials Requirement Planning

MRP is a production planning and inventory control system used to manage manufacturing processes.

An MRP system has **3 major objectives**

- Ensure materials are available for production and products are available for delivery to customers
- Maintain the lowest possible level of inventory
- Plan manufacturing activities, delivery schedules and purchasing activities