Sales Territory

Establishment of sales territories facilitates matching selling efforts with sales opportunities. Sales personnel are assigned the responsibility for serving particular groupings of customers and prospects and provide contact points with the markets, Territorial assignments lend direction to the planning and control of sales operations. A sales territory is a grouping of customers and prospect assigned to an individual salesperson.

House Accounts

A house account is an account not assigned to an individual salesperson but one handled by executives or home office personnel. Many are extremely large customers, most of whom prefer to deal with the home office. Frequently, house accounts are responsible for significant shares of a company's total business. When house accounts are excluded from territorial assignments, adverse effects upon sales force morale are possible as the sales personnel may feel that the company is depriving them of the best customers. Most companies prefer to minimise the number of house accounts. However, some large customers refuse to do business any other way. Companies in which sales personnel understand that their territories are particular groupings of customers and prospects rather than specific geographical areas, the house accounts have little adverse effect on sales force morale.

Objectives and criteria for territory formation

Objectives have to be kept in mind while forming territories. There are some (basically quantitative) criteria that should be considered:

1. Territory ranks: One of the most important responsibilities of the territory manager is to draw up territory ranks. If they are not drawn up properly, this could affect the morale and the

performance of the sales representatives. The results can be measured in terms of the sales volume, relative market share, or profits.

2. Number of territories: The prime objective of the sales manager is to determine both the number of territories to be formed and their configuration. If the number of sales territories were less, then the market coverage would be affected. On the other hand if the number of territories were more, salesmen would perceive a very narrow opportunity for their growth.

3. Equalisation of territory potential: It must be seen that all the sales territories have ample opportunity and potential. The optimum potential for each territory can be obtained by redistributing the accounts.

4. Territory coverage: It is another important aspect that has to be looked into carefully. Adequate coverage is necessary for the firm to obtain sizeable market share. The coverage should be effective such that the sales opportunity in the respective territories remains unexploited and efficient so that money, time or other resources are not wasted in the allotted territory.

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Territory size and work load factors

The territory size decreases or increases depending upon the workload. Companies determine the selling effort required i.e. the number of calls to be made to each account. This information is required to decide the number of salespeople. There are two models for doing this.

Single factor model:

The steps of this mode are as described below:

- Decide the driving factor for decision-making, which is usually sales potential.
- Then classify all accounts based on that one factor. For example, 3 types of accounts viz. H (High), M (Medium) and L (Low) are chosen with annual sales potential of

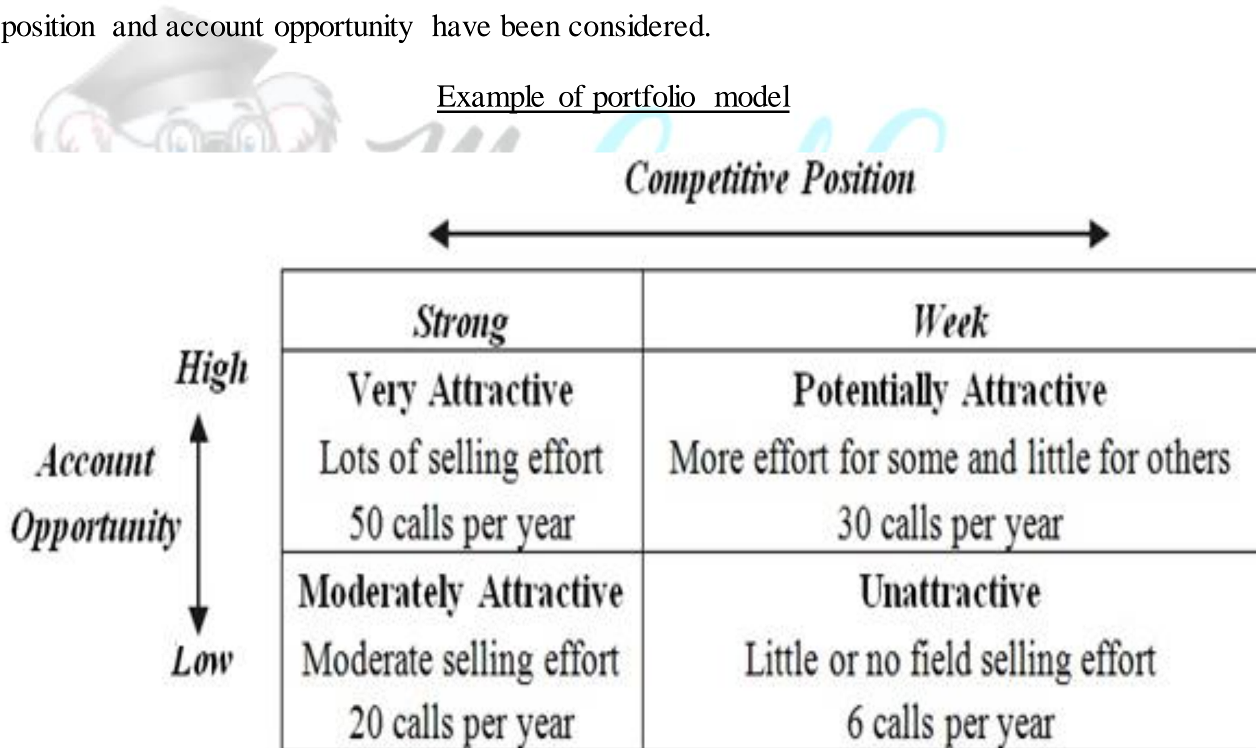
more than Rs. 1 crore, between 50 lakhs and 1 crore and less than 50 lakhs respectively.

- Then make a judgement about how many sales calls each category should receive. For example, H type requires one call per week, or 52 per year, M type requires one call per month, or 12 per year and L type of account requires one call per quarter, or 4 per year.

Portfolio model:

This modes works in the same way as single factor model, only difference being more than one criterion for classifying accounts. In the following example, two factors of competitive position and account opportunity have been considered.

Example of portfolio model



The below is a table, which shows how the territory size will be affected with the nature of workload.

Influence of workload factor on territory size

Workload Factor	Territory Size
Nature of Job	
Lots of presale and post-sale activity	Decreases
Nature of product	
A frequently purchased product	Decreases
A limited repeat-sale	Increases
Market development stage:	
New market-fewer accounts	Increases
Established market-more accounts	Decreases
Market coverage:	
Selective coverage	Increases
Extensive coverage	Decreases
Competition:	
Intensive	Decreases*
Limited	Increases

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Responsibility of territorial development

Development of sales territories is usually the responsibility of sales manager (such as divisional, regional, zonal or local) for a larger sales unit or division s/he is in charge of, who must know the market, customers, and sales personnel needed to do the job. The manager makes recommendations to corporate management or decides himself or herself on whether to increase or decrease the number of sales territories.

Bases for Territories

The bases on which the territories are created are directly linked to the objectives and criteria for sales territory formation. The actual division of the customer base into the respective territories can be done based on the:

1. Geography
2. Potential
3. Servicing requirements
4. Workload

Methods of Designing Territories

There are various methods that are used for designing sales territories. They are:

1. Build-up Method: This is a method in which the sales territories are designed by combining all the areas of a company's market that offer sufficient sales challenge.

2. Breakdown Method: In this method the number of territories is determined by dividing the projected average sales per salesman into an overall sales forecast.

3. Incremental Method: This is a method in which the numbers of territories go on increasing as long as the margin of profit that is generated by the territories surpasses the cost of maintaining them.

Need for establishment and revision of sales territory

Sales territories are set up, and subsequently revised as market conditions dictate, to facilitate the planning and control of sales operations. The design of the territories should permit sales personnel to cover them conveniently and economically, so that they can spend sufficient time with customers and prospects to become thoroughly conversant with their problems and requirements. This is required as successful selling is based upon helping customers solve their problems and not just converting sales.

There are five reasons for having sales territories:

(1) **To provide proper market coverage**: Territorial Design should be in such way that it lets the sales personnel spend more time with the customers. This will allow them to know the problems and requirements of the customers.

(2) **To control selling expenses**: Good territorial design helps in controlling the selling expenses and increasing the sales volume. Expenses incurred by the sales person in lodging, food, travel etc. can be reduced. Good territorial design accompanied with appropriate sales personnel contribute for the increase in sales volume.

(3) **To assist in evaluating sales personnel**: Good territorial design helps the management in setting quotas and evaluating the sales personnel's performance.

(4) **To contribute to sales force morale**: Well-designed sales territories help in motivating the sales force. Excellent planning in designing the territories results in increasing the morale of the sales person as he spends least time on the road.

(5) **To aid in the coordination of personal-selling and advertising efforts**: Finally by setting up sales territories, the management can improve the co-ordination of personal selling and advertising efforts and can optimise the performance through synergy.

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1) Providing proper market coverage

If sales management of a company could not effectively match selling efforts with sales opportunities, it will surely not have proper market coverage and lose business to competitors. In order to overcome problems of this type, generally management must establish sales territories, if the company does not have them, or revise those that it has. If sales territories are set up intelligently and if assignments of sales personnel to them are carefully made, it is possible to obtain proper market coverage.

2) Controlling selling expenses

Good territorial design combined with careful salesperson assignment makes sales personnel spend less time on tour, which reduces or eliminates unnecessary charges for transportation and lodging

& food (in case of night stay) expenses. These savings, plus the higher sales volumes from increased productive selling time, reduce the ratio of selling expenses to sales. The intelligent setting up or revising of sales territories is what sales management should follow to see that selling expense are utilised to get the best result.

3) Assisting in evaluating sales personnel

Well-designed sales territories assist management in evaluating sales personnel. Selling problems vary geographically, and the impact of competition differs widely. When the total market is divided into territories, analysis reveals the company's strengths and weaknesses in different areas, and appropriate adjustments can then be made in selling strategies. Through analysing the market territory by territory and pinpointing sales and cost responsibility to individual sales personnel, management has the information it needs to set quotas and to evaluate each salesperson's performance against them.

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4) Contributing to soles force morale

Well-designed territories are convenient for sales personnel to cover and get the desired results quickly with reasonable-sized workloads resulting in high earnings, self-confidence, and job satisfaction. Good territorial designs can also help in making sales force morale high as there are few conflicting claims of sales personnel on the same accounts.

5) Aiding in coordination of personal selling and advertising

Management may set up sales territories or revise existing territorial arrangements to improve the coordination of personal selling or advertising efforts. In most situations, personal selling or advertising alone cannot accomplish the entire selling task efficiently or economically. By blending personal selling and advertising, management takes advantage of a synergistic effect and obtains a performance greater than the sum of its parts.

Sales personnel play key roles in capitalizing upon synergistic opportunities. Prior to launching an advertising campaign for a new consumer product, for example, sales personnel call upon dealers

to outline the marketing plan's objectives, provide them with tie-in displays and other promotional materials, and make certain that adequate supplies of the product are on hand in the retail outlets. Territorial assignments make every dealer the responsibility of some salesperson, and proper routing ensures that sales personnel contact all dealers at appropriate times relative to the breaking of the consumer advertising campaign. In some cases, the manufacturer's marketing plan calls for dealers to share in the costs of advertising the product; here, again, sales personnel "sell" such cooperative programs to dealers. In situations where sales personnel do work related to the advertising effort, the results are more satisfactory if the work is delegated on a territory-by-territory basis rather than for the entire market.

Procedures for setting up or revising sales territories

In setting up or in revising sales territories, there are four steps:

(1) Selecting a basic geographical control unit (e.g. region/state/district/city/zone)

(2) Determining sales potentials in control units

(3) Combining control units into tentative territories (e.g. city like Kolkata can be divided into territories like South, North, Central and Salt Lake)

(4) Adjusting for coverage difficulty and redistributing tentative territories

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1) Selecting a Basic Geographical Control Unit

The starting point in territorial planning is the selection of a basic geographical control unit. The most commonly used control units are postal code numbers, intra-city areas (like North Kolkata or Thane area in Mumbai), cities (metro or towns), states, regional area (like South India) or wide geographic region (like South East Asia or Middle East). There are two reasons for selecting a small control unit.

Geographical identification of sales potential: The precise geographical identification of sales potential is required. While selecting areas, management has to see at least 3 factors viz.:

- The area or control unit is not too large to handle
- The areas with low sales potentials are not hidden by inclusion with areas having high sales potentials
- The areas with high sales potentials are obscured by inclusion with those having low sales potentials.

Ease of redistribution: The second reason is that smaller units are relatively stable and unchanging so that management can easily redraw territorial boundaries by just redistributing control units among territories. If, for example, a company wants to add to Mr. X's territory and reduce Mr. Y's adjoining territory, it is easier to transfer district or city-sized territory rather than state-sized ones.

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2) Determining Sales Potential in Each Control Unit

The next step is to determine the sales potential present in each central unit. The territorial planner needs to measure sales potentials, which represent the maximum possible sales opportunities open to a specific company selling a good or service during a stated future period to particular market segments. A vague identification such as, "Our product is bought by women," is not sufficient; rather it should be considered as "Our product is bought almost entirely by middle aged, lower-income women living in suburban areas." This more precise description of the buyers comprising the market helps to analyse the sales potential.

Having identified potential buyers, the planner next determines the sales potential in each control unit. The planner finds out the number of potential buyers in each class in each control unit and the unit’s total market potential. Then the planner estimates the portion of the unit's market potential that the company has an opportunity to obtain i.e. the sales potential.

Market potentials are generally converted into sales potentials by analysing historical market shares within each control unit, adjusting for changes in company and competitors' selling strategies and practices, and arriving at estimates. Having made these estimates, the territorial

planner ascertains those control units with sufficient sales potential to justify sales coverage. For the manufacturer with mass distribution, this is not a problem. Mass marketers provide sales coverage in every control unit, regardless of how little sales potential it represents, because maximum sales exposure is crucial to marketing success. Many manufacturers, however, provide sales coverage only in those control units containing sufficient sales potential to assure profitable operations, and for most manufacturers, there are some control units where selling costs are excessive. This is true for the producers of both industrial-goods (such as selling machine tools and mining equipments) and consumer shopping and specialty goods.

3) Combining control units into tentative territories

The planner next combines units into *tentative* sales territories. This is only a tentative arrangement, because subsequent adjustments must be made for relative coverage difficulty. At this stage, the planner assumes that no significant differences in the physical or other characteristics of individual control units exist. The purpose is to obtain a "first approximation" of sales territories, by combining contiguous control units into tentative territories, each containing approximately the same sales potential.

At this point, however, the planner decides the number of territories, and this, assuming that all sales personnel are of average ability, is identical to deciding sales force size. Basically, the planner estimates the percentage of total sales potential that the average salesperson should realize. Analysis of past sales experience helps in making this estimate, which, once made, is used to determine the number of territories. In effect the planner estimates the sales productivity per sales personnel unit and divides it into the total estimated sales potential, thus arriving at the number of sales personnel units-and territories-required. For instance, the sales management in a company estimates that an average salesperson must achieve Rs. 10 lakhs monthly out of a total sales potential of 1 crore, which means that 10 territories and 10 sales personnel are required. When these estimates and this calculation have been made, contiguous control units are combined into tentative territories of roughly equal sales potential. To simplify this step, sales potentials for control units are expressed as percentages of total sales potential. In the above example, control units are grouped into 10 tentative territories, each containing about 10% of the sales potential. Throughout this grouping process, the planner combines only control units contiguous to each

other; individual control units are not split into different territories, even if this results in tentative territories with different total sales potentials.

Having decided about the size of the territories, the next thing to ponder is the shape of the territory. The shape of a territory affects both selling expenses and ease of sales coverage. In addition, the shape can also contribute to sales force morale if it enables the salesperson to increase his or her productivity. There are 3 shapes, which are in wide use. These are:

(a) The wedge

(b) The circle

(c) The clover leaf

a) The Wedge

The wedge is appropriate for territories containing both urban and rural areas. It radiates out from densely populated urban areas to relatively less populated semi-urban and rural areas. Wedges can be in many sizes up to just under 360 degrees. Travel time among adjoining wedges can be equalised by balancing urban and rural sales calls.

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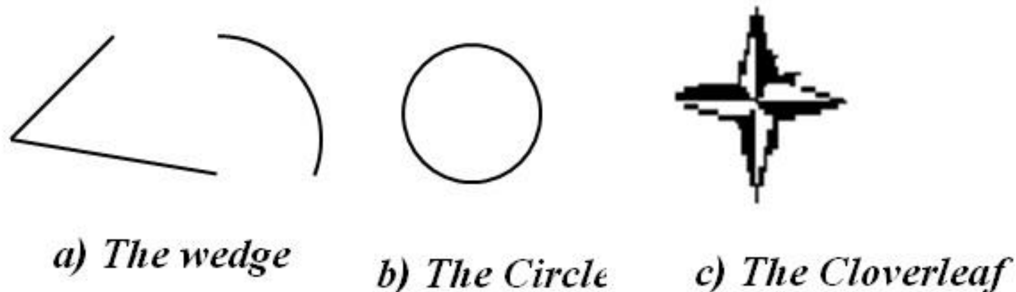
b) The Circle

It is appropriate when accounts and prospects are evenly distributed throughout the area. The salesperson assigned to the circular-shaped territory is based at some point near the centre, making for greater uniformity in frequency of calls on customers and prospects. This also makes the salesperson nearer to more of the customers than is possible with a wedge-shaped territory.

c) The Cloverleaf

This shape is desirable when accounts are located randomly through a territory. Careful planning of call schedules results in each cloverleaf being a week's work, making it possible for the salesperson to be home weekends. Home base for the salesperson assigned to the territory is near the centre. Cloverleaf territories are more common among industrial marketers than they are

among consumer marketers and among companies cultivating the market extensively rather than intensively.



4) Adjusting for Differences in Coverage Difficulty and Redistricting Tentative Territories

The final step is to redistrict the tentative territories through adjusting for coverage difficulty. The tentative territories, each containing approximately the same sales potential almost certainly will require different selling efforts. Hence, it is time to remove the unrealistic assumption that no differences in the characteristics of geographical control units exist. Significant differences in physical and other characteristics make providing sales coverage more difficult for some control units than for others. For instance, metro cities like Delhi or Mumbai have far greater sales potentials for most products than some small states like Manipur or Sikkim, but the time required to contact customers and prospects and hence selling expenses in those cities is much less than that of those remote hilly states. In order to tackle this anomaly, the optimum territorial arrangement should be construed by equating *incremental sales per each rupee of selling expenditures* among all territories. In doing so, both sales potential and coverage difficulty should be taken into account. As the planner adjusts for differences in coverage difficulty, control units are taken away from some tentative territories and added to others. The final territorial arrangement almost certainly is one in which different territories contain different sales potentials.

Redistributing the territory allocations to tackle coverage difficulty i.e. the differences in workloads is a 7-step procedure, as discussed below:

1. Determine number, location, and size of customers and prospects in each tentative territory: Customers are identified and located through sales records; prospects through trade directories, subscription lists to trade publications, classified directories, and credit-reporting agencies. Size is measured in terms of sales potential.

2. Estimate time required for each sales call: This varies from account to account and from prospect to prospect, so customers and prospects are classified into groups, estimating an average time per call for each group. Time and duty analyses of sales personnel are used to check these estimates.

3. Determine length of time between calls: It denotes the amount of time required for travelling from one customer to the next. This varies among regions depending on the density of customers (and prospects), condition of roads, transportation facilities and geographical characteristics like the presence of large rivers, lakes, mountains, deserts or dense jungles, and other barriers to travel make natural and necessary territorial boundaries. Transportation facilities are as important as physical characteristics. If travel is by automobile, territories are planned so that driving could be mainly on primary, all-weather roads, whereas in case of air travel, territories must be planned with an eye on locations of air terminals. The management should interrelate and balance differences in sales potential, physical or geographical characteristics, and transportation facilities and routes, while planning about the sales territories.

4. Decide call frequencies: Within certain control units, some or all customer and prospect classes require call frequencies that differ from those in other control units. Differences in the strength of competition require variations in call frequency rates. Similarly, call frequency rates are influenced by the market acceptance of the product line within control units. Cost studies on minimum profitable order sizes also provide input to the decision on call frequencies.

5. Calculate* the *number of calls possible within a given period: This requires a simple arithmetic calculation. In order to determine the number of calls per day in a certain control unit, the average

amount of time required for each call is added to the average time between calls and then it is divided into the number of working hours in the day. As call lengths vary for different classes of customers (and prospects) and products, necessary adjustments must be made accordingly.

6. Adjust the number of calls possible during a given period: Depending on different types of the customers (and prospects) and products, necessary adjustment in the sales call frequencies (i.e. the number of calls possible during a given period) is required. Further adjustments are made to assure that the workload in any territory is not larger than the allowable maximum and that selling expenses are within budget limits. In order to accomplish the optimum territory allocation, where incremental sales per each rupee of selling expenditures are equated among all territories, management has to transfer and adjust controls among different adjacent territories.

7. Check out the adjusted territories with experienced sales personnel: Sales personnel who are working or have worked in a particular territory and thus familiar with customer service requirements, competitive conditions, the topography, roads, and travel conditions, may provide more insight hitherto unknown to the management. These cause further shifting of control units from one territory to another, each shift bringing the final territorial arrangement a little closer to the optimum.

Assignment of sales personnel to territories

When the arrangement is the best obtainable, it is time to assign sales personnel to territories. Up to this point in territorial planning, an implicit assumption has been that all sales personnel are "average," that is, that all are interchangeable, each capable of producing similar results at similar costs regardless of territorial assignments. Clearly, this is an unrealistic assumption, adopted only for territorial planning purposes, and one that is discarded when sales personnel are assigned to territories. Few sales personnel are average; they vary in ability, initiative, and effectiveness as well as in physical condition and energy. What constitutes a reasonable and desirable workload for one individual may not be appropriate for another person. Furthermore, salesperson's

effectiveness varies with the territory assigned. One person is outstanding in one territory and a failure in a second, even though territorial sales potentials and coverage difficulty factors are almost identical. Performance, moreover, is conditioned by customer characteristics, customs and traditions, ethnic influences, and the like. Dyadic interactions, with customers and prospects, in other words, vary in their outcomes from one territory to another depending on many factors, most of them outside the salesperson's control.

In assigning sales personnel to territories, management seeks the most profitable alignment of selling efforts with sales opportunities. The territories, containing varying sales potentials, represent different amounts of sales opportunity. The sales personnel, differing in ability and potential effectiveness, represent the range of available selling talent. According to Hauk, management should assign each salesperson to the particular territory where his or her relative contribution to profit is the highest.

The general guide for assigning sales personnel to territories is not universally applicable because the discretion that management has in making these decisions differs from company to company. At one extreme, some companies display great reluctance to transfer sales personnel to different territories, management fearing not only sales force resistance, but also the consequences of breaking established salesperson-customer relationships. These companies adhere to a "no transfer" or "infrequent transfer" policy and build restrictions on shifting sales personnel into territorial designs. The planner expands or contracts territorial boundaries, adding to or subtracting from individual territorial sales potentials, until territories contain sales potentials appropriate to the abilities of assigned sales personnel. These companies, in effect, design sales territories around, and to fit, the abilities of sales personnel.

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At the opposite extreme, management in a few companies is free to assign any salesperson to any territory, designing territories (according to procedures like those discussed earlier) and closely aligning salespeople's ability levels with territorial sales opportunity levels. Management shifts sales personnel to predestined territories where their relative profit contributions are maximised. The situation in most companies is somewhere between the two extremes. For various reasons, some totally outside management's control, certain sales personnel are not transferable, but others are freely moved from one territory to another. This means that management designs some sales territories to fit the ability levels of non-transferable sales personnel while reassigning other sales

personnel with ability levels appropriate to sales territories redesigned according to the suggested procedures.

Now let us work through several situations involving assignment of sales personnel to territories, our purpose being to demonstrate that, where practical, effective sales management assigns each salesperson to the territory where his or her relative profit contribution is maximised.

CASE 1:

First, consider the situation in which territories have equal sales potential and coverage difficulty, but the sales personnel differ in ability. Following figure depicts this situation.

Assignment of Sales Personnel to Territories of Equal Potential

Territory	*Name of Salesperson Assigned*	*Ability Index*	*Money Potential (Rs.)*	*Predicted Sales (Rs.)*	*Predicted Profit Contribution (25 % of Sales) (Rs.)*
A	X	1.0	5,00,000	5,00,000	1,25,000
B	Y	0.8	5,00,000	4,00,000	1,00,000
C	Z	0.7	5,00,000	3,50,000	87,500
Total			**15,00,000**	**12,50,000**	**3,12,500**

Predicted sales are obtained by multiplying each territory's money potential by the ability index of the salesperson assigned. Predicted profit contributions are assumed to amount to 25 percent of predicted sales. The total profit contribution is Rs.312,500, the maximum attainable here regardless of how the sales personnel are assigned.

CASE 2:

Now suppose that these territories are redesigned so that their sales potentials vary in direct proportion with the ability of the sales personnel assigned, with the same total money potential as before (Rs.15 lakhs). The results of this assignment pattern are shown in the following figure.

Assignment of territories as per salespersons' ability

Territory	*Name of Salesperson Assigned*	*Ability Index*	*Money Potential (Rs.)*	*Predicted Sales (Rs.)*	*Predicted Profit Contribution (25 % of Sales) (Rs.)*
A	X	1.0	6,00,000	6,00,000	1,50,000
B	Y	0.8	4,80,000	3,84,000	96,000
C	Z	0.7	4,20,000	2,94,000	73,500
Total			**15,00,000**	**12,78,000**	**3,19,500**

Redesigning territories so that sales potentials are directly proportional to abilities of assigned sales personnel increases the predicted profit contribution by Rs.7,000 (from Rs.312,500 to Rs.319,500).

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CASE 3:

Again suppose that the same sales potential worth Rs.15 lakhs is divided in some other way as shown below:

Assignment of territories as per sales personnel's ability

Territory	Name of Salesperson Assigned	Ability Index	Money Potential (Rs.)	Predicted Sales (Rs.)	Predicted Profit Contribution (25 % of Sales) (Rs.)
A	X	1.0	10,00,000	10,00,000	2,50,000
B	Y	0.8	3,00,000	2,40,000	60,000
C	Z	0.7	2,00,000	1,40,000	35,000
Total			**15,00,000**	**13,80,000**	**3,45,000**

The above figure shows a different way of assigning territories to sales personnel still in rank order of their respective abilities. Again there is an increase in the predicted profit contribution, this one even more impressive than in the preceding example. However, it is unlikely that this is a feasible territorial division and salespersons assignment plan. The coverage difficulty and associated work load now involved in covering territory A would likely exceed salesperson X's capacity to perform; thus, X's ability index should be lowered. Similarly, territories B and C now have such greatly reduced sales potentials (which means that their coverage difficulty is less than before) that probably neither would represent sufficient workloads for salesperson Y or Z.

There are upper and lower limits to the amount of sales potential to incorporate in anyone territory. These limits are set by coverage difficulty and the size of the workload that it is reasonable to expect any salesperson, regardless of ability, to assume. Then, too, selling expenditures do not fluctuate directly with predicted sales volumes throughout all sales volume ranges. They may rise more or less in proportion to sales volume increases, but after a certain point is reached, the rate of rise accelerates greatly (that is, as the difficulty of making sales becomes increasingly greater), and they may decline proportionately to sales volume decreases until a minimum level is reached (where potential sales are no longer large enough to support needed selling expenditures). Workload restrictions, in other words, confine the uniformity of variation of selling expenditures within fairly narrow limits.

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The optimum territorial arrangement is reached when the *incremental* sales produced per monetary unit of selling expenditures are equated among all territories. After a sales territory reaches a certain size in terms of sales potential, adding successive increments of sales potential is feasible only up to the point at which the last money of selling expenditures just brings in sufficient sales to provide a money of profit contribution. A company seeking the optimum territorial arrangement generally concludes that it is wise to cut off additional selling expenditures before reaching this "point of feasibility." This is because the best condition requires that the all territories are equated in terms of the incremental sales produced by the last money of selling expenditures in each.

Thus far, an implicit assumption has been that ability indexes do not change with assignment of sales personnel. However, sales personnel have different degrees of effectiveness in different territories, because environmental forces condition selling performance. It is not realistic, in other words, to assume that ability indexes for individual sales personnel are fixed regardless of the territorial assignment. Hence the following case may be considered.

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CASE 4:

Assume a situation where sales personnel maintain their rank order according to ability indexes as they are switched among territories but where the indexes change. Considering CASE 2 where the assignment pattern was A-X, B-Y, C-Z (i.e. assignments A, B and C were given to salespeople named X, Y and Z respectively) and the respective ability indexes were 1.0, 0.8, and 0.7. Now if the same assignments were given to different people in the pattern of B-X, A-Y, C-Z then the respective ability indexes could be 1.0, 0.9, and 0.7. Salesperson X in this situation performs better than salesperson Y regardless of the assignment. Using the basic data in CASE 2, the results of the CASE 4 are interpreted in the following figure.

Assignment of territories where ability indexes vary with the assignment

Territory	Name of Salesperson Assigned	Ability Index	Money Potential (Rs.)	Predicted Sales (Rs.)	Predicted Profit Contribution (25 % of Sales) (Rs.)
A	Y	0.9	6,00,000	5,40,000	1,35,000
B	X	1.0	4,80,000	4,80,000	1,20,000
C	Z	0.7	4,20,000	2,94,000	73,500
Total			**15,00,000**	**12,78,000**	**3,28,500**

It can clearly be understood from the above figure that this assignment pattern results in a higher total profit contribution than that secured by assigning sales personnel to territories strictly in accord with their abilities (that is, Rs.328,500 versus Rs.319,500).

Thus in some territorial designs, the best salesperson should not necessarily be assigned to the territory with the highest sales potential, and in some, a salesperson should not necessarily be assigned to the one territory where his or her profit contribution is higher than that of any other salesperson who might be assigned to the same territory. Each salesperson should be assigned to the territory where his or her relative contribution to profit is the highest. In CASE 4, salesperson X could make a higher profit contribution than salesperson Y in territory A, but X contributes more relative to Y, when assigned to territory B. Similarly, salesperson Y's inferiority relative to salesperson X is less when Y has territory A and not territory B.

Ability indexes change with different assignment patterns; consequently, management estimates ability indexes for each possible assignment pattern. The large number of possible assignment patterns makes complex the task of achieving an ideal assignment. When twelve salespeople are to be assigned to twelve territories, for example, there are 12! (i.e. 479,001,600) possible patterns. It would be possible, although not practical, to write down all 479,001,600 assignment patterns and select the one providing the maximum profit contribution; fortunately, however, the assignment linear programming technique and the computer afford a rapid and less laborious way to find the solution. But even this technique requires estimates for the probable net profit contribution for each salesperson for each possible assignment pattern, and this requires not only

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knowledge of the nature and peculiarities of each territory, but insight on how each salesperson might perform in each territorial environment.

Let us now see how sales personnel can plan their calls in order to save time and increase the market coverage.

Routing and scheduling sales personnel

Routing and scheduling plans aim to maintain the lines of communication, to optimise sales coverage and minimise wasted time. When management is informed at all times of salespersons' whereabouts in the field or at least knows where they should be-it is easy to contact them to provide needed information or last-minute instructions. Chances are good that sales personnel will be where they are supposed to be.

Routing and scheduling plans improve sales coverage. The mechanics of setting up a routing plan are simple, but in working out the plan, detailed information is required on the numbers and locations of customers, the means and methods of transportation connecting customer concentrations, and desired call frequency rates. Detailed maps are needed showing not only towns and cities and transportation routes but trading-area boundaries, mountain ranges, lakes, bridges, and ferry lines. If sales personnel are to travel by air, airport locations need spotting. The route, or routes, finally laid out should permit the salesperson to return home at least on weekends.

If the route planner considers the desired call frequency rate for each customer on the route, the call schedule is a by-product of setting up the route. In most cases, however, making up the call schedule is more than planning the route. Customers and prospects are segregated according to the desired call frequency rate. Using detailed maps, the planner identifies the locations of members of each customer and prospect group and reconciles the route with these locations. Hence, often the salesperson has a different route each time he or she travels the territory, to achieve the desired call frequencies and to incorporate new customers and prospects into the itinerary. Furthermore, because changes occur in account classifications, prospects, competitive activity, as well as in road conditions, it is impractical to set up fixed route and call schedules good for long periods.

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Routing and scheduling plans reduce wasted time by sales personnel. Much backtracking, travel time and other "non-selling" time is eliminated, and scheduled call frequency is to fit customers' needs. Effective routing and scheduling automatically builds up the size of the average order. In scheduling sales personnel, some firms not only designate the customers to call upon each day but prescribe the time of day to make each call. Detailed scheduling is coupled with a system for making advance appointments.

Companies not using scheduling plans usually suggest advance appointments, but often salespeople ignore this suggestion. For effective detailed scheduling the scheduler needs current information on time required for each call, probable waiting time at each stop, travel time between calls, and the probable time with each customer. This information is difficult to collect and update. Detailed scheduling is most feasible when customers give their full cooperation. Most firms allow their sales personnel "time cushions" to allow for the many variations met on each selling trip.

Companies, almost without exception, benefit from systematic routing and scheduling, but not all find detailed scheduling feasible. The petroleum marketing companies, and other firms with combination driver-salespersons, use detailed routing and scheduling plans successfully, as do several large pharmaceutical manufacturers. Less detailed routing and scheduling plans are used by wholesalers of groceries, drugs, and hardware. Detailed scheduling plans are appropriate in trades typified by frequent calls, great homogeneity among customers, short travel time between calls, and highly standardised products not requiring large amounts of creative selling time-that is, in situations where trade selling predominates.

The size of the territory and geographic layout determine the type of the route. Sales personnel should find out a travel route so that they can start from their home in the morning and return in the evening. The actual route the salespeople follow each day within each section can help maximise their use of daily prime selling hours.

There are many patterns of routing and scheduling, which are as below.

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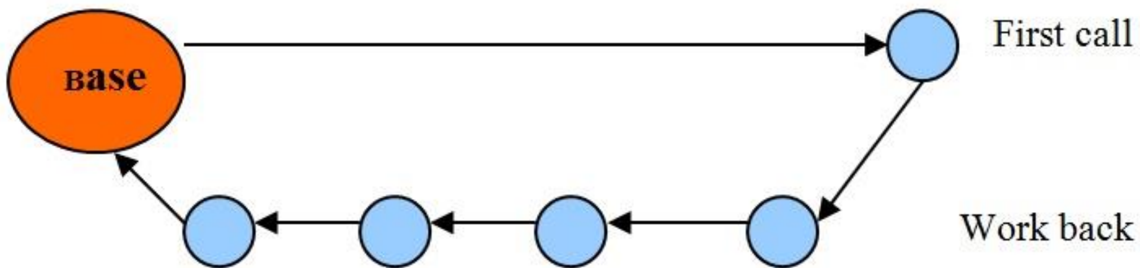
Straight-Line Pattern:

If most of their accounts are strung out more or less in a straight line from the base, the salespeople may follow this pattern as shown below. In this pattern, they should get up early and go to the far end of the territory before making the first call. They would then work their way back, so they end up near base at the end of the day.

Straight-Line Pattern



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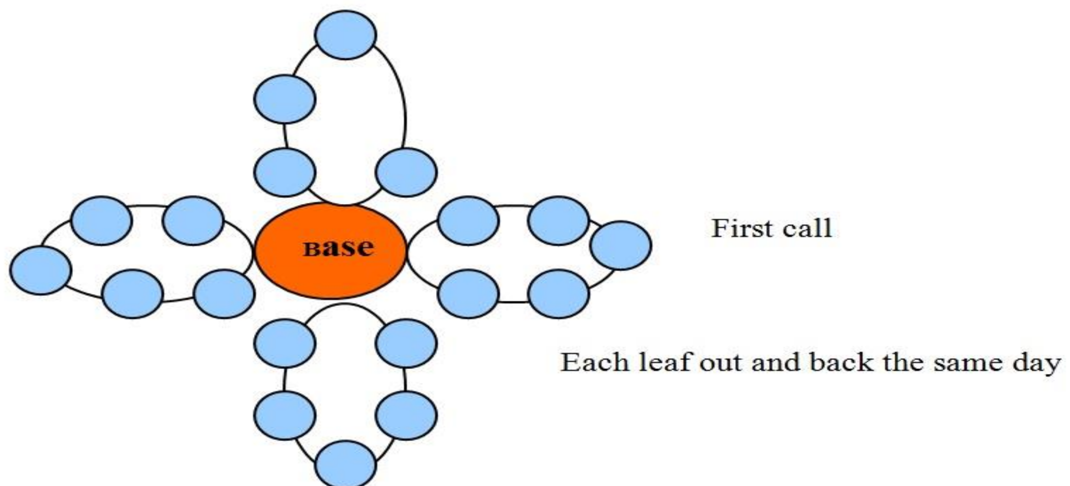
Cloverleaf Pattern:

In cloverleaf pattern, the sale personnel is placed in the middle and start in the morning and tries to cover maximum number of accounts in a day as shown in the following figure.

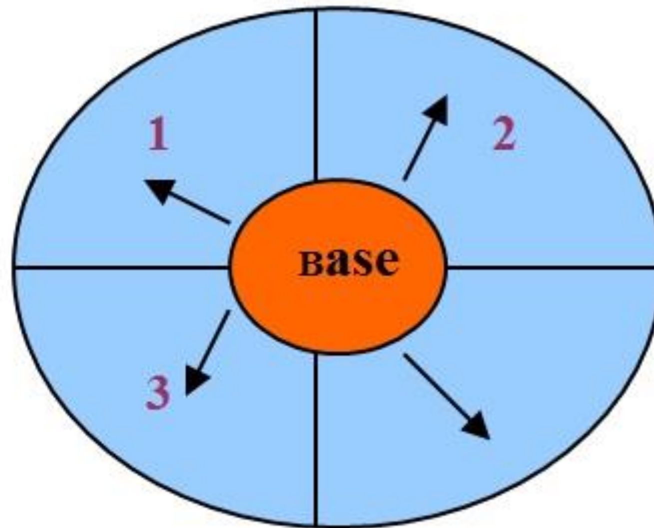
Cloverleaf Pattern



Major City Pattern:

In major city pattern also, the sales personnel should cover one area at a time since it represents the different industrial areas, but in a different way as shown below.

Major City Pattern



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Both the routing plan and the scheduling plan assist sales management in obtaining closer control over sales personnel's movements and time expenditures. The routing and scheduling plans are integral parts of the overall process of establishing sales territories and assigning sales personnel. Any routing or scheduling plan should have frequent check-ups to detect needed adjustments. Call reports are compared with route and call schedules to determine whether plans are followed. Variations or discrepancies are noted and sales personnel asked for explanations. Adherence to the plans is also enforced through frequent and unannounced visits to the field by supervisors or branch sales managers.