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V. INDUSTRY SEMINARS AND SPEECHES - SHORT TERM

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a. "Definition and Concepts of Feasibility Analysis", draft of lecture notes and "Suggested Readings for Feasibility Analysis", sponsored by Society of Real Estate Appraisers, October 9-11, 1969

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"Definitions of and Concepts of Feasibility Analysis"

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I. "Feasibility studies" is a broad descriptive term for reports which are concerned with the likelihood that a particular real estate project will satisfy specific objectives within a context of limiting constraints. It is no more useful than is the generic term theft which includes robbery, burglary, embezzlement, and so on, among its specific variations.

A. Therefore it is necessary to analyze the concept and components of this definition in order to structure the process of performing "feasibility studies" for a client.

B. It will also be important to establish that various feasibility studies represent a significant departure from real estate appraisal. While your professional training as an appraiser is most valuable from the standpoint of data collection, I believe you will find your analytical training relative to appraisal a handicap in regard to comprehensive to feasibility work.

1. The well trained appraiser is trained primarily to observe what is rather than what might be. To find patterns in the past rather than to foresee a drastic new future, to avoid speculation, and to be comparable to precedents already found in the market.

2. An appraisal report is a specialized type of feasibility analysis in which the objective of the buyer are presumed to be typical, average rather than unique, rational and objective rather than subjective.

3. Any type of feasibility report reflects user →

II. For a given project to be determined "feasible" it is necessary for the real estate analyst to determine that there is a reasonable likelihood of satisfying specific client objectives within a network of ~~limiting~~ constraints and given specific and limited resources.

A. "Likelihood" is a judgment call - an intuitive or subjective statement of a probability and is related to the question of risk. Risk is concerned with the possible variation in results relative to expectation. To talk about risk is is necessary to know as many of the variables which can go wrong and the tolerance of the decision maker to absorb the surprise potential. Simply not to know is to be in doubt but it tells you nothing about the nature of the business or the financial risk.

B. The concept of satisfaction - the definition of criteria of acceptable satisfaction levels depends upon the specific objectives to be achieved, measurement of the results, and the constraints which are not to be exceeded. The viewpoint and definition of satisfaction is therefore subjective because the criteria must be generated from the objectives and limitations of a specific plan.

C. Because the definition of feasible will shift with each client, proper feasibility analysis is therefore as much concerned with precise problem stating and formulation as with measurement of the success of the problem solution.

1. Ideally feasibility ~~analysis~~ study and therefore the analyst must provide a total system of objectives, standards of satisfactions and definition of constraints to the degree that the client or the context of the situation does not clearly provide these.

2. Many clients are unable to clearly state their own problem and so the first step is to review with them in a systematic way the elements which may be found to bear on the problem. As will be shown the appraiser most often is asked to do only a portion of the total problem stating-problem solving process but it is important to establish in writing, if only in outline form, the premises and objectives of the client which underlie the balance of the analysis to be provided by the appraiser.

3. In appraisal you always provide a definition of value, highest and best use, theoretical definitions, shaping your procedures, and the statement of limiting conditions. These become so automatic that one loses sight of the fact that these represent a presumption of ~~higher~~ buyer-seller objectives, resources, and limiting constraints within which it is feasible to obtain a certain price in the market. The viewpoint of the appraiser is to compare a given property interest with the concensus of other users as seen in the historical market place. Feasibility analysis, however, generally requires replacement of these standard presumptions with those of a single client with possible subjective and unique user requirements.

III. The basic framework in feasibility anlaysis requires identification of constraints, alternatives, and evaluation of criteria in each of the following subject areas:

A. Objectives of the parties at interest.

1. Strategic objectives
2. Secondary objectives
3. Preferred style of business management

a. Scale of enterprise.
b. Time horizon for a commitment and realization.
c. Essence of role or function of enterprise to be housed.
d. Specific functions of enterprise to be served.
e. Preferred method of static risk control.
f. Preferred method of dynamic risk control.
g. Preferred revenue source and its characteristics.
h. Preferred method of personnel management and motivation.
i. Preferred method of ~~financing~~ capital.

B. Market trends and ~~limits~~ opportunity areas.

1. Aggregate data on population, employment, income, etc.
2. Economic and national policies affecting timing, risk, etc
3. National programs with specific focus on a community or client.

C. Merchandising targets + alternatives

1. Specific small groups with space needs
2. Characteristics of these space requirements
3. Ability to pay for required space

D. Legal-political constraints = alternatives

1. Regualtory controls on all investors
2. Regulatory controls on site and space development
3. Political attitudes and consequences

E. Physical-technical constraints + alternatives

1. Location requirements
2. Site attributes
3. Improvement attributes
4. Space user requirements

F. Esthetic-ethical constraints = alternatives

1. Community considerations and relationships
2. Space user considerations
3. Prime contractor-subcontractor relationships
4. Client obligations to his own interest and goals

G. Financial constraints + alternatives

1. Financial timeline assumptions
2. Capital budget requirements and resources
3. Operating budgets and resources
4. Profit expectations and yield
5. Measurement of yield and risk

IV. Only after you have identified the full range of considerations which may be involved in feasibility analysis can one begin to understand the proper nomenclature of the various types of reports which are lumped under the general terminology of "feasibility studies".

A. Reports can be classified as follows: (refer to syllabus for article by James Downs)

1. Strategy studies - selection of objectives and measurement criteria.
2. Market trend study - economic base, and related aggregate data analysis.
3. Merchandising studies - consumer surveys, competitive property analysis, marketability evaluations, etc.
4. Legal opinions, model laws and forms, and political strategies.
5. Engineering, land planning, and architectural studies.
6. Compatibility studies.
7. Capital budgets, cash flow forecasts, rate of return analysis, financing plans, etc.

V. At the University we define real estate as artifical space. The first man to roll a rock in front of a cave delineated a natural void from the total space that surrounds him (to achieve some attribute of safety or comfort which he did not find in nature) and thereby created real estate. Whether the delination of space is a simple pilon at the corner of a field on the Nile or a condominium plat on file with the register of deeds, all of the hardware of real estate is concerned with delineation of space, space which is fixed in reference to some point on the surface of the earth.

A. The essence of real estate is space, and that is the commodity which has value. Since the space must house some activity of those who built it it can be given various attributes in regard to its function.

B. Real estate is the business of manufacturing, financing, merchandising, and managing artifical space. The essence of any business, public or private, is the management of resources, generally cash, through a process which eventually brings back the resource. Cash—raw material—goods and process—inventory-accounts receivable—cash plus surplus is the abstract pattern of the cash cycle.

C. Completion of the cash cycle is the ultimate demonstration of feasibility. Thus before an outlay is made there must be some expectation of how these outlays will be returned. The revenue source to be tapped defines the limits of feasibility. Therefore the primarly concern is determining effective demand and how this is converted to completion of the cash cycle process.

VI. The first step in doing a total feasibiltiy study is to define the essence of the enterprise to be housed in the space to be tested for feasibility. This essence will determine both its appropriate situs factors and its desirable or essential physical characteristics. But most important its economic essence will determine the model of the process by which it converts and attracts cash into the cash cycle. Economic feasibility is economic model building - something you have been doing for years although perhaps not by that name. (I/C = V is an economic model which can be elaborated many different ways).

A. Teaching feasibility analysis is a problem of teaching creative modeling techniques which can be adapted to the great variety of real estate projects which you may be called on to analyze.

B. Teaching modeling as a method of creative thinking about real estate is different than teaching models in the form of check lists for various types of projects.

The requirements of a specific filling station company site are check lists derived from a model of that particular operation. A format of a study of a supermarket may become stereotyped as a model.

What I would like to demonstrate in part this morning and tomorrow morning are ways of thinking in order to better state the clients problems and objectives or to simplify the collection and analysis of information relative to the constraints and alternatives specified for the problem. Model building can operate through:

1. A process of enrichment, i.e. elaboration of vary simple models.
2. Analogy and association with previously developed model.
3. Alternating attention to partial aspects of the total solution.

D. A point to begin analysis can be suggested by a variety of conscious mental tricks which will stimulate and increase the frequency of a breakthrough in your understanding of a particular modeling problem, such as:

1. Begin Attribute analysis of a known factor, such as the site, or the client business operation, or a consumer with money to spend.

2. Study behavioral pattern of ultimate consumer

3. Search for the implicit assumption of clients premises.
2. Attempt to justify the reverse of the client suggested solution.
4. Search for a method to merchandise the negative factors in the solution to be tested for feasibility.
6. Find a logical reason for eliminating the need for information.
7. Structure with a drawing the process of reducing information to focus on a problem.
8. Gain insight by means of personal, direct, symbolic, or fantasy analogy.

D. E. Each feasibility study has a major element of creativity, of abstracting and conceptualizing, and of probing to make the implicit---explicit. Therefore the art of doing a feasibility study has much in common with the architect attempting to serve the needs of a client in the design and construction of a building.

1. The appraiser is generally asked to critically review for feasibility a specific project already defined by the client or he is asked to determine what type of project would best serve the broader objectives of a client. In the first case its like serving as architectural critic or review board while in the second, is serving as the architect himself.

2. Just as the specific requirements of an architectural problem or client program have become too complex for intuitive resolution and design, so to have the subject areas of interest for feasibility analysis become too complex for intuitive judgments about the probability of satisfaction within existing constraints and limitations.

3. The architect must simulate and anticipate the construction process in his choice of a design. Full feasibility analysis requires complete simulation of the entrepreneurial process. to the degree that the client is providing as given various answers to the components of complete feasiblilty analysis, the analyst should provide in the report a statement of these constraints just as he prefaces an appraisal report with definitions of value, market behavior, and a statement of limiting conditions.

4. Just as the architect may move through several sequences in his planning such as schematics, preliminary planning, working drawings and specifications, the feasibility analyst should properly identify the level of his analysis and the specific elements of total feasibility with which he has dealt. If the professions could agree on terminology as to report nomenclature, the client could better understand what to expect in a report and the weight which should be given the results.

Feasibility Notes

I. Financial models as a short cut to feasibility study in 236.

1. Identification of profit centers within non-profit projects
2. The full-up period, discounts and absorption rates by the week - cut-off period and closing dates.
3. Land, processing of Fanny May paper, performance bond vs. letters of credit, standby fees lower than manual, overhead spread, production control and standardized engineering, fill-up period and management fee based on economic rents rather than subsidized rents.
4. Idnetification of constraints by identifying those variables for which there is little local ~~bearing~~ variance and those which have high local variance. For example, real estate taxes vary widely and affect income directly. Construction costs vary some but debt service over 40 years on the original cost varies less, and finance costs do not vary. Fill-up period is a high risk factor depending on degree of control and construction and accuracy of marketing forecast.

II. Strategic objectives vs. tactics

1. Strategic objectives may be to generate more real estate tax as in the parking lot case. Alternative tactics would be to either encourage private ramp, or private air right developemnt, or make room for adjacent rprivate development or use ramp as bait for seed money to incfease desirability of adjacent rpoperty and hence their market value or use air rights for a tax exempt land use to prevent 2 sites from being tax exempt.
2. Strategy may be to acquire tax loss and management ability but to avoid further investment. Tactics could include joint venture, limited partnership, lease and buy-back, turn-key, etc.

III. For next Fridya everyone should have had approved a model structure of their approach to their feasibility study.

IV. Physical-technical constraints in practice get sub-divided into the following factors which might be best recognized as components of feasibility in their own right:

1. Location
2. Site
3. Structural layout and design
4. Spatial relationships of site and structure to environs

Society of Real Estate Appraisers

SUGGESTED READINGS FOR FEASIBILITY ANALYSIS
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