MODULE: 3
BUSINESS PLANNING PROCESS

Meaning of business pla

- *Written document* prepared by the entrepreneur that describes all the *relevan* *external and internal elements* involved i *starting a new venture.*
- Integration of functional plans like marke finance, manufacturing, HRD, etc
- Addresses short/term decision making
- Integration and coordination of effective business objectives and strategies.
- Road map that addresses 'where am I no where am I going? And how will I reach

Scope of Business Plan depe on Interested parties like

- Entrepreneur
- Investor
- Suppliers
- Buyers
- Other stakeholders like employees, consu regulatory bodies

Objective/importance of B

*To give direction to the vision formulated by the entrepreneu
*To objectively evaluate the prospects of business
*To monitor the progress after implementing business plan
*To persuade others to join business
*To seek loans from financial institutions
*To visualize concept in terms of market availability, organi
operational, and financial feasibility
*To guide entrepreneur in actual implementation of plan
*To identify actual strength and weakness of plan

Elements/Components of

- Introduction
- Executive summary
- Market/industry/environmental analysis
- Description of venture
- Production plan
- Operations plan
- Technical plan

Elements/Components of

- Marketing plan
- Organisational plan
- Human resource plan
- Social plan
- Assessment of risk
- Financial plan
- Schedule/milestones
- Appendix/annexures/biblography

Requirements/guidelines f
developing a Business Pla

- Keep it short and sweet
- Focus
- People and Roles
- Avoid jargon
- Information based on study
- Realistic and objective
- Proper mission statement
- LT & ST goals

Advantages of BP

- Analysis of ideas on paper
- Help in convincing others
- Reduction in emotional bias
- Provides SWOT analysis
- Justifies one's ideas/plans
- Develops consistent strategy

(co

Advantage of BP

- Achieve one's commitment
- Feasibility study
- Action plan
- Selling tool
- Fundraising
- Evaluating progress

Disadvantages of BP

- Discouragement
- Cutting corners/short cuts
- Takes Time
- Tunnel vision
- Expense
- Inflexibility
- Obsolete
- Lack of accountability
- Poor implementation

gu

Why do business plans fa

- Improperly described plan
- Poorly defined strategies
- Lack of details on job responsibilities and op schedules
- Unprofessional goals and objectives
- Incomplete plan
- Not measurable
- Inadequate commitment
- Lack of experience
- No sense of threats and weaknesses
- No proper customer base

Watch this video

- https://www.youtube.com/watch?v=h-smuQmaR5Q

BUSINESS PLANNING PROCESS

BUSINESS PLANNING PROCESS

Idea generation

↓

Environmental scanning

↓

Feasibility analysis

↓

Project report preparation

↓

Evaluation, control and review

1. IDEA GENERATION

It is the ***first step*** in the business pla process. This step ***differen entrepreneur*** from usual business. entrepreneur may come up with ***business idea*** or may bring in ***addition*** to existing product in the m ***Sources*** of new idea for entrepreneurs

- Consumers/ customers
- Existing companies
- Research and development
- Employees
- Dealers, retailers

2. Environmental scanning :

Environmental scanning which includes ana *external and internal environment* that business idea.

1. External environment comprises of

Socio cultural appraisal : *culture and tra* existing in society. It is comprised of *valu* *beliefs* of people which determines the *acce* *of product* by customer in the market.

Technological appraisal : it assess v *technological options* available to convert a to product. It also provides an *brief overview* technological aspects.

- **Economic appraisal** : it assess the status society in terms of *economic developmen capita income, national income, consum pattern in the business.*
- **Demographic appraisal** : it assess *population pattern* of given geographic Which includes *sex, age profile, distrib etc*.
- **Government appraisal** : it assess the va *legislation, policies, incentives* formulat particular industry. Flexibility of these determine ease for entrepreneur in ter opening venture in particular area.

2. **Internal environment :**

- **Raw material** : it refers to in terms of availability material required for the process of production material availability is at distance place and expensive then entrepreneur should give thought to the same.
- **Production/ operation** : it assess the availab various machineries, equipments, tools and tech that would be required for production.
- **Finance** : it studies total requirement of fina terms of start up expenses, fixed expenses, r expenses etc.
- **Market** : refers to study on potential custom target customers in market.
- **Human resource** : refers to demand and sup required human resource in market and estima expenses to be incurred on human resource.

3. FEASIBILITY ANALYSIS

- **Marketing plan** : lays down the ***strategies of ma*** which can lead to success of business plan. Strategie terms of marketing mix which includes (***product place, promotion***) which determines the potential c of customers for product in the market.
- **Production plan/operational plan** : production drafted for manufacturing sector where as operation designed for business into service sector. It comp ***strategies on parameters such as location layou availability of material, human resource etc.***
- **Organizational plan** : ***defines type of ownership pa*** company, sole trading concern, family business, pr public limited company etc.
- **Financial plan** : financial plan indicates the require proposed business enterprise which includes fun cash flow statement, break even point, projected projected balance sheet, profit-loss statement.

4. Project report preparation :

Project report is a written document describes step by step strategies involv starting and running business.

5. Evaluation , control and review :

As company operates in dynamic enviro company has to ***monitor and review stra and policies*** to stay in line with compe existing in market.

MARKETING PLAN

MARKETING PLAN

- **Marketing plan** refers to plan that describes condition and strategy related to how produ services will be distributed, priced and prom market.
- **INDUSTRY ANALYSIS :** prior to prepara market plan entrepreneur are required to c industry analysis section of the business Industry analysis provides information national and local market that affects ma operation of company. Industry analysi involves collecting information about comp which is available in form of secondary d newspapers, article, websites, catalogs, prom interview with distributors, customers etc.


STEPS INVOLVED IN MARKETIN
RESEARCH
1. Define purpose and objective
2. Gathering data from secondary sources
3. Gathering data from primary sources
4. An

STEPS IN MARKETING RESEARCH

1. **Defining the purpose or objective** entrepreneur should be clear about the r of information required by the bus sources through which required data w collected, whether required data will be primary or secondary source of informati
2. **Gathering data from secondary sou** Secondary source of information is available through magazines, new p libraries etc. It usually refers to data ava about competitors strategy and their posit the market.

3. **Gathering information from primary so**
primary data required for market resea
collected from people directly through me
such as observation, networking, intervie
focus group, exhibition etc.

4. **Analyzing and interpreting results :** r
should be evaluated and interpreted depe
on the objective of research pr
Summarizing results will provide
preliminary insights about competitors m
position and their image in compe
environment.

CHARACTERISTICS/ IMPORTANCE C MARKETING PLAN

- it should provide strategy for accomplishi company mission and goal.
- It must provide for the use of existing res and allocation of all equipment , fi resources, human resources in company.
- It should provide for continuity so that each a marketing plan can successfully meet long goals and objectives of company.
- It should be simple and specific in nature s provide appropriate roadmap in terms of pla market strategy for company.
- It should focus on criteria to be evaluated to marketing success of the company.


MARKETING PLAN- STEPS
DEFINING THE BUSINESS SITUATION
DEFINING THE TARGET MARKET (OPPORTUNITIES AND THREATS)
CONSIDERING STRENGHTS AND WEAKNESS
ESTABLISHING GOALS AND OBJECTIVES
DEFINING MARKETING STRATEGY AND ACTION PROGRAM
PRODUCT
PRICING
DISTRIBUTION
PROMOTION
BUDGETING MARKET STRATEGY
IMPLEMENTATION OF MARKET PLAN
MONITORING PROGRESS OF MARKETING ACTIONS

STEPS IN PREPARING MARKETING PL

1. **Defining business situation** refers to unde past and present business achievements o venture. It give basic insight about so persisting in market, response of customers t venture in market, and helps in pred customer acceptance of company produ market.
2. **Defining target market** : target market re group of potential customers towards venture aims its market plan. Knowledge of market will provide basis for determ appropriate market action strategy to meet of customers. Target market also includes m segmentation which involves process of di market into definable and measurable grou purpose of targeting market strategy.

3. **Considering strength and weakness** : str of business refers to core areas which con is specialized in which may be abun experience of company in similar ar business and weakness may be in ter production capability, or layout which p limited space for equipment and operatio
4. **Establishing goals and objectives** : mar goals of the company should be clea specific in nature as it has to clearly in about nature of product, target customers promotion , advertising support etc.

5. Defining marketing strategy and action progra
refers to specific activities outlined to meet the v
business plan objectives and goals.

a. Product and service : indicates description of p
or service to be marketed in the new venture.

b. Pricing : refers to price to be charged for prod
market before which company is required to co
various aspects such as cost, margin , competitio

c. Distribution : refers to means through which p
will be made available to customer in market
involves decision relating to nature of p
distribution channel, middlemen etc.

d. Promotion : refers to various channels through
entrepreneur will advertise company prod
customers in market.

7. **Budgeting marketing strategy :** After dr
marketing plan entrepreneur is requir
estimate total expenses to be incurr
process of implementing market plan. Ex
of marketing plan should be in line
planned expense of entrepreneur.

8. **Implementation of marketing plan :** n
plan should be implemented in the com
should be informed to the workforce inv
in marketing activity, it acts as guiding el
to direct on strategies which will
marketing process effective.
9. **Monitoring progress of marketing act**
marketing of plan involves tracking sp
results of marketing effort. Sales da
product, data gathered by market surve
few methods of monitoring progress of n
plan.

Elements of Marketing Pl

- Executive summary
- Business overview
- Target market
- Goals
- Pricing, positioning and branding
- Market strategies
- Implementation tactics
- Budget
- Evaluation of results

Importance of MP

MP leads other plans because:

- Overall direction
- Marketing goals
- Business environment
- Target and tactics

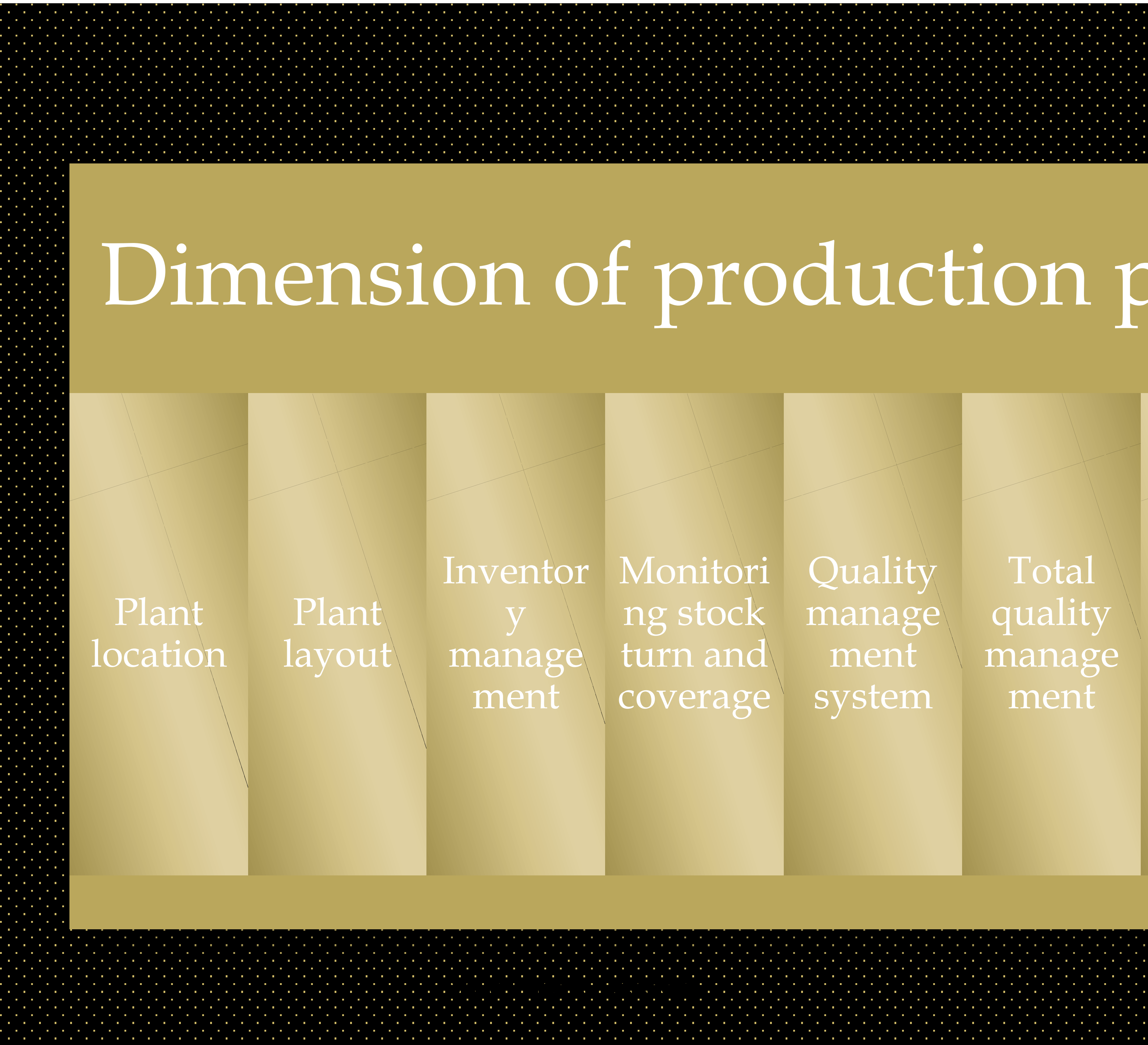
PRODUCTION PLAN

PRODUCTION PLAN

- Production plan is the process of converti
input into output through a *conversion p*
- The inputs are in the form of land, labou
material, machinery, capital and informat
- Transformation takes place through mach
in manufacturing unit and through empl
skills in service sector.

Importance of production p

- Better service to customers
- Fewer rush orders
- Better inventory control
- Effective use of equipment
- Reduced idle time
- Better morale
- Lower capital requirement


Dimension of production p
Plant location
Plant layout
Inventory management
Monitoring stock turn and coverage
Quality management system
Total quality management

DIMENSION TO BE COVERED FOR PRODUCTION OR OPERATION PLA

- **Plant location** : refers to geographic locatio the infrastructure of company will be bui operations of the company will take Following aspects should be taken care of choosing plant location :

a. Vicinity to raw materials
b. Availability of raw materials
c. Availability of labour
d. Proximity to market
e. Climate condition
f. Cost of location
g. Tax, subsidies and loans

- **Plant layout** : is ***pattern in which space wo arranged*** in order to utilize the mach equipment, and manpower. Effective design plant layout ***reduces unnecessary movem*** employees and helps in ***effective utilizat time and resources*** in company. Variables considered while planning plan layout :

a. Proper utilisation of space

b. Proper light & ventilation in all areas premises

c. Ensure smooth flow of operation

d. Supervision can be carried out in smooth ma

e. There are provision for emergency exit

f. There is flexibility to introduce changes in fu

- **Inventory management** : inventory manag refers to maintaining inventory in form o materials, packing materials, WIP, adequa order to meet business requirements.
- **Monitoring stock turn and coverage** : moni individual stock items to identify *fast and movers* depending on the industry.
- **Quality management system** : q management refers to maintaining quality *in of product* produced in company. As cust these days are getting conscious about quali by day maintaining quality standards in p will help in building company image an build customer loyalty to company/products.

- **Total quality management :** manag
focuses on quality improvement th
prevention of problems and errors. It re
continuous monitoring and control of pr
performance and quality etc.
- **Budgeting production plan :** depending
COGS per quantity, projected cos
production at any stage can be estimate
amount of production and budget de
upon the capacity of production unit.

Factors for production pl

- Market forecast
- Inventory control
- Availability of resources
- Standard operating procedures
- Risk factors (C

www.FirstRanker.com

ORGANISATION PLA

ORGANIZATIONAL PLAN

- Organizational plan involves deciding the of ownership that entrepreneur inter form. Nature of planning , organizing, le and controlling will be determined by nat business or form of ownership.
- Process by which an organisation creates procedures and actions to achieve stated objectives
- List of work plan, structures, responsibili relationships, responsibilities, accountabi etc

Aspects of org plan

Focus/important areas:

Forms of ownership
Designing org structure
Job design
Manpower planning (guid

Importance of org plan

- Gives Focus to work and resources
- Identifies real needs of clients
- Reveals what should no longer to be deliv
- Legitimises work of organisation
- Provides roadmap to organisation's grow
  (guic

STEPS IN ORGANIZATIONAL PLAN

- **Developing management team** : refers to set of em employed in the company who are in charge of ma the activities on the operating part of organization.
- **Legal form of organization** : refers to composition a existence of business. Business may be proprie partnership or corporation form of business. Thr forms of business are :

a. Corporation is legal entity that is run by stock having limited liability. It is regulated by the statut treated as separate legal entity for liability and tax pu

b. Proprietorship : is form of business with single ow has unlimited liability, controls all decisions, and profit.

c. Partnership : two or more individuals having u liability who have pooled resources to own a busine

- **Ownership** : it refers to pattern of investme control of owners in company, which in conditions relating to sharing of profit and business.
- **Liability of owners** : of business covers two either members of business will have limi unlimited liability depending on legal fo business agreed by partners.
- **Costs of starting business:** refers to ex incurred in starting the business and propor contribution from every member of busin sources through which required finan business will be raised.
- **Continuity of business :** refers to question o will take over business operations in futu what will be members role in coming future.

- **Transferability of interest** : entrepreneur wi
two options in relation to transferability of in
Owner may transfer his interest after ass
credibility of member in business or ma
interest with his own wish.
- **Capital requirement :** refers to amount of
required to start up business venture, s
through which required finance for compa
be obtained, what will be contribution of me
or the owner towards business.
- **Management control :** it refers to cont
business in the hands of an individual per
several members in business. It also compr
power of members in terms of decision m
guiding business activity in company.

- **Distribution of profit and loss** : profit
firm may be shared as per the terms
conditions agreed by the members of bus
loss or liability of individual depends on r
of business agreement of partner wit
business.
- **Tax attributes for forms of business**
advantage and disadvantage will va
accordance with form of busines
proprietorship and partnership profit an
of business is considered same as th
individual as in corporation as busin
treated as separate entity tax is laid on bu
and earning of individual separately.

- **Designing the organization** : it comprises of and explicit indication to the members organization as to what is expected from them expectation are grouped in following areas :

a. Organization structure refers to task, responsibil accountability of every member in the business.
b. Planning, measurement and evaluation of sc communicate goals and strategies to attain goals in business.
c. Rewards : forms of rewards and yardstick ba which employees will be rewarded in company.
d. Selection criteria refers to guidelines for se employees in company.
e. Training : refers to determining skill requiren employees in company and accordingly design t program for employees in company.

- **Building the management team** : this p
involves to see that strategy of business s
be in line with objective of the com
management team of the company shou
role model for employees in company
accordingly plan and guide employees to
organization goal attainment. Manag
team of the company should be flexible
new techniques and innovation in the com
Management team should focus on
efficient employees in company and de
core values which guide and re
employees behavior and attitude in comp

- **Role of board of directors** : board of dir
in the company are required to r
operating and capital budget, developing
term strategic plan for growth and expa
supporting day to day activities, reso
conflicts among owners or shareholders, e
proper use of assets, developing ne
source of information for entrepreneurs.
- **Board of advisors and organization** : bo
advisors are not permanent employees
company. They are set of expertise who
business in terms of management and tec
issues in company.

Steps in preparing org pl

- Objectives
- Design team
- Current processes
- Tasks and functions
- Current structure
- Identify changes in structure
- New org chart
- Implementation plan (guic

FINANCIAL PLAN

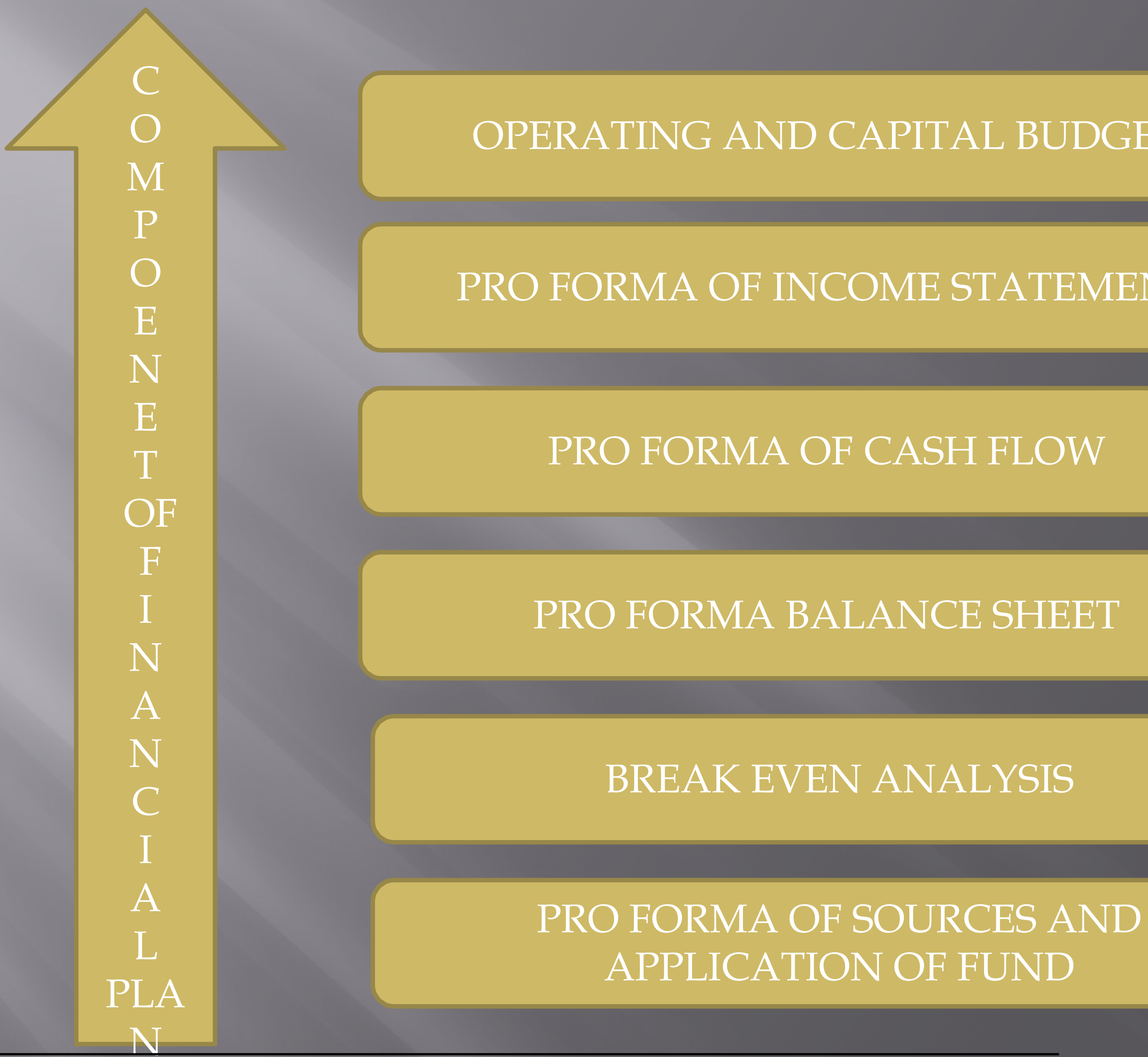
FINANCIAL PLAN

- It studies total requirement of finance in
of start up expenses, fixed expenses, ru
expenses etc.
- Financial plan indicates the requireme
proposed business enterprise which in
fund flow, cash flow statement, break
point, projected ratio, projected balance s

Financial Plan

- Fin plan describes activities, resources, equipment and materials needed to achie objectives and the timeframes involved

- Can be a budget outlining future income, expenditure and investments for further expansions


COMPOENET OF FINANCIAL PLAN
OPERATING AND CAPITAL BUDGE
PRO FORMA OF INCOME STATEMEN
PRO FORMA OF CASH FLOW
PRO FORMA BALANCE SHEET
BREAK EVEN ANALYSIS
PRO FORMA OF SOURCES AND APPLICATION OF FUND

- **Operating and capital budget :** entrepreneur must develop an operatin capital budget first. Capital budget ref capital expenditure involved in the proje operations budget refers to operating exp like utilities, salary, depreciation, in insurance, advertising etc. Projection is u phased in a monthly basis
- **Proforma income statement :** refe projected gross profit calculated from pro revenues minus projected costs. costs s comprise of COGS, and operating expen above. Taxes are deducted from gross pr give net profit

- **Proforma cash flow** : refers to projected available calculated from projected cash minus projected cash dismemberment. It is of difference between actual cash receipts an payments. It is not the same as profits.

  Often calculated from profits by adjustin depreciation, account receivables, inve prepaid expenses, accounts payabes and activities like capex, debt and dividend payn

- **Proforma of balance sheet** : summarise projected assets, liabilities, and net worth o venture. Balance sheet represents the posit the business at end of year.

- **Break even analysis** : Entrepreneur in
stage is required to know when profit m
achieved which will help him under
financial potential of a start up business. E
useful technique to analyze how many
have to be sold in order to break even.
even is volume of sales where venture n
makes profit nor loss. BE=Overheads/m
- **Proforma for sources and application of**
: summarizes projected source of fund ava
to the venture and how these funds w
distributed.

Objectives of Fin plan

- Funding
- Balance risks and costs
- Simplicity
- Long term view
- Flexibility
- Liquidity
- Optimum use of funds
- Financial leverage

Guid

Importance of a fin plan

- Cash management
- Long range view
- Spoting trends
- Prioritising expenditure
- Measuring progress

Guide

PROJECT REPORT

What is project report?

- A project report is a business plan written a purpose of procuring funds usually fro financial institution.
- It could even be for internal project sancti
- It has more elobarate financial plan with detailed feasibility studies to convince pr viability and to get funds

CONTENTS OF PROJECT REPO

1. **Cover page** : page of the project report s
contain the title of the project, name, address
the readers of the report can easily c
entrepreneur relating to queries of report.
2. **Table of contents** : table of content are co
after the main body of the project report is fin
Topics covered in the project report along w
page number should be mentioned in the
report.
3. **Executive summary** : should be written aft
completion of project report as it gives brief
project. Length of the executive summary s
not exceed more than one-two pages.

4. **Company information and industry** : Her should explain the ownership form o company, which should contain the reaso venturing into the proposed business plan, h you plan to satisfy the needs and expectation potential customers and existing competit industry. It should also include SWOT anal company.
5. **Technical plan** : In this part of the report t aspect analysed during the technical feasib the report should be highlighted. The choice product and service to be offered shou justified. Report should be able to explain h product of the company is creative and inno from the existing product in the market.

6. **Marketing plan** : this aspect of the product s focus on the industry and market feasibi should describe about the pricing policy, fi of market research, how large is the market product to be offered by the company, about marketing strategy adopted by the co to promote the product, target customers co is focusing on.
7. **Operations plan** : it describes abou manufacturing and service delivery process utilised for production of chosen produc service. It should explain about the inno brought in the process of production which it better when compared to existing competi should also focus on the location, availabi resources required for production.

8. **Organizational plan** : It gives information abo management team who are part of the comp focuses on the management and technical possessed by the employees in company and will prove to be beneficial for the work proces carried in the company. It should highlight as why even after possessing such efficient skil preferred joining your organization.
9. **Project timeline** : this chapter explain abo network diagram which explains about the duration required for the project. Diagram e about the various activities in the project, wh sequentially organized and the time duration re for the execution of the project is arrived by esti time required for completion of every activity formation and later process of the company.

10. **Critical risk and assumption** : it explai
various assumption made during the forma
the company particularly regarding the fina
There may be various risks related to the p
and market company is planning to enter. A
details should be highlighted in this part
report. Sensitivity analysis is incorporat
analyse the impact of these risks and pro
action is documented.

11. **Social plan** : it explains how company proje
benefit the society. It should highlight
company will generate employment opportu
lead to skill development of local people, pro
of goods and services to be provided to th
people, utilization of local resources etc.

12. **Exit strategy** : this is the negative aspect business but the company should explain ho would close down the business if the comp not able to earn the expected profitabilit investors will be keen to know as though how investment can be recovered in such situatio

13. **Financial plan :** it is an important part report which will contain brief content a sections with numbers in monetary ter explain about the financial composition company, various sources through which co has raised required finance, total expen incurred by the company which will be effe explained through the means of break analysis, PBP, ARR, NPV, IRR etc and the co financial reports.

14. **Conclusion** : this summarizes the key a
of the report in concise manner. It shoul
the report on a positive note so that the re
develop positive image about the report.
15. **Appendices** : it contains conclusion part
report and supplement data which is imp
part for the report but cannot be included
initial topics of the report.

Project-Definition

- PMI's PMBOK defines project as "A tempora endevour undertaken to create a unique goo service"
- F L Harrison- "A non-repetitive, one-off undertaking, normally with discrete time, fi and technical performance goals"
- British standard- "A unique set of cordinatec activities with definite starting and finishing ,undertaken by an individual or organisatio meet specific objectives within defined sche cost and performance parameters.

Characteristics of projec

- Focus
- Life span
- Team spirit
- Life cycle
- Unique activities
- Specific goal

- Sequence of activities
- Specific time
- Interrelated activities
- Transcience creates urgency
- Uniqueness creates risk and uncertainty
- subcontracting

Factors in prep of a proje

- Entrepreneur's interest
- Government regulations
- Resource availability
- Market adequacy
- Cost factor
- Risk level

Developing a project rep

- Choosing an idea
- Observation
- Scanning business environment
- Preparation of project report

Significance of project rep

- Road map
- Basis for loans
- Reflects economic health
- Others – record, future reference, registra issue of shares

FEASIBILITY STUDY/PROJ APPRAISAL

Feasibility study/Project appraisal

- Process of investigation, review and evalu of the project or its alternatives as define
- Concerns nature and scale of investment, economic evaluation based on cash flow analysis of all costs and benefits.
- Cyclical process repeated as new ideas co additional info received, till a feasibility i
- Ex-ante assessment to decide on the proj

Objectives of feasibility st

- To assess project results
- To improve project management and pro planning
- To promote learning
- To establish new knowledge
- To understand different stakeholders' perspective
- To ensure accountability
- To ensure best use of funds
- To avoid weaknesses and future mistakes

Reasons for feasibility stu

- Assesses economic viability of the project
- Protects from larger capital investments
- Useful and valid for different projects
- Ideas on paper before implementation
- Presents associated risks and returns
- Provides objective evaluation of projects
lenders

Importance of feasibility stu

- Understanding demand
- Assessing resources
- Marketing feasibility
- Marking timelines

METHODS AND TECHNIQUES

Types

- Evaluation techniques
  - Traditional (ARR, PBP)
  - Discounted cashflow (NPV,IRR,P

Accounting rate of return(AR

= Average annual profit after tax * 100
Average investment over project life

= Total profit/no of years *100
Net WC+ Salvage value+ ½ (initial cost-salvage value)

www.FirstRanker.com

ARR - example

Project Cost (Rs)	56125	56125
Annual profits - 1	3375	11375
Annual profits - 2	5375	9375
Annual profits - 3	7375	7375
Annual profits - 4	9375	5375
Annual profits - 5	11375	3375
Total profits	36875	36875
Project life (yrs)	5	5
Salvage Value (Rs)	3000	3000

Calculate ARR

ARR

= Total profit/no of years ____________ * 100

Salvage value+ ½ (initial cost-salvage value)

= ____36875/5____________ = 25%

3000+(56125-3000)1/2

Variations of ARR

$$= \frac{\text{Average annual profit after tax}}{\text{Investment} * 1/2} * 100$$

$$= \frac{\text{Average annual profit after tax}}{\text{Investment}} * 100$$

$$= \frac{\text{Average annual PAT + Depreciation}}{\text{Investment} / 2} * 100$$

ARR - merits and demeri

- Merits
  - Simple to understand and calculate
- Demerits
  - Accounting income and not cash income
  - Time value of money not taken

Payback period

- PBP refers to the time it takes to payback t
  original cost of the investment
- Represented as no of years
- Usually a cut-off is used to accept/reject a
  proposal
- Useful in mutually exclusive decision mak

PBP – an example

Investment= Rs 56125

Year	Annual cash flow (Rs.)	Cum. cash flow (Rs.)	Commen
1	14000	14000	No
2	16000	30000	No
3	18000	48000	No
4	20000	68000	Between years. 56125-48 8125/200 =0.406 PBP = 3.
5	20000+5000 (including salvage value)	93000	

PBP- merits and demerits

- Merits
  - Easy to understand and calculate
  - Cash flow is considered
- Demerits
  - Ignores cash flow after PBP/frontloading
  - Ignores time value of money

PBP review

- Useful for:
  - War situations
  - Liquidity crunch situations
  - Short term focused companies

- We need a system that considers
  - Full cash flow
  - Time value of money

Time value of money

- Money has utility
- Utility has a cost
- Cost of money is called interest, linked to

- Future value = Present value + interest
  = Present value $(1+r)^n$
- Present value = Future value/ $(1+r)^n$
- Compounding and discounting techniqu

FV and PV - example

1. What is the FV of Rs 1000 in 3 yrs at 10% compounding rate?

$1000 * (1.1)^3 = 1000 * 1.331 = $ Rs 1331

2. What is the present value of Rs 1610 of ye 10% discounting rate?

$1610 * (1/1.1)^5 = 1610 * 0.6211 = $ Rs 1000

PV of a cash flow

- Present value of a cash flow is cumulative
  individual years.
- PV of year1+PV of year2+PV of year3+. .
  +PV of year n
- $PV= \Sigma [CF_n / (1+r)^n]$

Discounted cashflow metho

- Net Present Value (NPV)
- NPV indicates the PV of future cash flow Investment
- NPV= Σ [CF_n / $(1+r)^n$] – C0
- Accept if NPV is +ve, Reject if NPV is -ve

Merits of NPV method

- Takes into account time value of money
- Takes into account lifetime cash flow
- Allows for different discount rates
- Helps evaluate mutually exclusive project

Demerits of NPV metho

- Depends on discount rate which itself is r
clear

- Absolute measure and not a percentage o
capital

Discounted cashflow metho

- Internal rate of return (IRR)
- Discounting rate of a future cashflow at whi becomes zero.
- 'r' such that = $\Sigma\,[CF_n / (1+r)^n] - C_0 = 0$
- Decision based on a cut-off 'r'
- Calculation by trial and error method or usi sheet =IRR(A1:A5,guess rate)

Discounted cashflow metho

- Profitability Index (PI) or Benefit/cost rat
- PI = PV of inflow/Outflow
- PI = = Σ [CF_n / $(1+r)^n$] /Co
- Similar to NPV but presented as a ratio

Cap budgeting practices in Ind

- DCF is more popular
- Multiple criteria used for decision making
- IRR is used by 85%, NPV by 65%
- 68% use PBP usually small firms
- PI is used more by public sector units

Exercise -1

- A company has the following investment projects

Project	Co	C1	C2	C3
A	-10000	10000		
B	-10000	7500	7500	
C	-10000	2000	4000	12000
D	-10000	10000	3000	3000

Calculate payback, ARR, IRR and NPV at 10% discount rate and rank them

Payback

A. 10000/10000 in 1 year

B. 10000/7500 in 1 yr +2500/7500=1/3

total = 1.33 years

C. 10000/6000 in 2 yrs + 4000/12000

=1/3 yrs

total = 2.33 yrs

D. 10000/10000 in 1 year

ARR

A. 10000/1
---------- *100 = 200%
10000*1/2

B. 15000/2
--------- * 100 = 150%
10000*1/2

C 18000/3
----------*100 = 120%
10000*1/2

D 16000/3
---------*100 = 107%
10000*1/2

ARR = Average PAT / ½ Investment

NPV

NPV= $\Sigma[CFn/(1+r)^n] - C0$

A. (10000*0.909)-10000 = **(910)**

B. (7500*0.909)+(7500*0.826)-10000 = **3013**

C. (2000*0.909)+(4000*0.826)+(12000*0.751)-10000 **4134**

D. (10000*0.909)+(3000*0.826)+(3000*0.751)-10000 **3821**

IRR

- By trial and error method,

A. 0%
B. 32%
C. 27%
D. 37%

Summary

	ARR (%)	PBP (Yrs.)	NPV (Rs.)	IR
A	200	1	(910)	0
B	150	1.33	3013	32
C	120	2.33	4134	27
D	107	1	3821	37

LEARNINGS

Discussion

ARR is misleading
PBP of A and D is same but IRR different
Higher NPV has lower IRR (C and B)

THANK YOU

Methods and technique

Non-discounting techniques

- Payback period (PBP)
- Return on investment (ROI)

Discounting techniques:

- Net Present Value (NPV)
- Rate of return/Internal rate of return(IRR
- Profitability Index(PI)

Pay back period(PBP)

- Number of years required for the project's cumulative cash inflows to equal its cash outflows. It is time required to recover in cost of project or time taken to break eve

Advantages of PBP

- Simple in concept and application
- Low calculation cost
- Liquidity indicator
- Suits high risk of obsolescence

Disadvantages of PBP

- Ignores cash inflows after PBP
- Ignores time value of money
- Ignores salvage value
- It is more a method of capital recovery th
profitability.

Average rate of return (ARR)/

- Capital employed and related income is determined over the entire economic life project and average yield is calculated

1. ROI/ARR = (annual average net earnings/original investment)*100
2. ROI/ARR = (annual average net earnings/average investment)*100

-Annual average net earnings is after deprec and tax for full economic life

Average rate of return (ARR)/

3. *(Increase in expected future annual net earnings/initial increase in required investment)*100*

Average investment =

1. Original investment/2
2. (Original investment-scrap value of asset)
3. *(original investment+scrap value of asset)/2*
4. *(Original investment-scrap value of asset/2)+ net working capital+scrap value*

Advantages of ARR

- Easy to calculate
- Considers entire cashflows
- Based on accounting profit

Disadvantages of ARR

- Ignores time value of money
- Cost and future inflow cant be accurately estimated
- Ignores project period (short term higher gets preferred)
- Unsuitable for investment in parts (assun full investment in the beginning)

NET PRESENT VALUE (NPV)

Net Present Value (NPV

- Considers time value of money
- PV for all outflows and inflows for the en
duration is discounted by cost of capital a
NPV calculated
- NPV = PV of each inflow- initial investme

  = CUM (CFt/(1+k)t) - CFo

  = CUM (CFt*PVFk,t) - CFo

Advantages of NPV meth

- Recognises time value of money
- All cash flows considered
- Achievement of Profitability objective
- Value additivity achieved

Disadvantage of NPV met

- Difficult to understand
- Ignores project period and investment siz
- Discount rate is tough to decide

PROFITABILITY INDEX (P
BENEFIT-COST RATIO (BC

Profitability Index

- PI = PV of cash inflows/PV of cash outflo
- PI(net) = Net Present Value/Initial cash o
- Net PI = PI-1

- Project is accepted if PI>1
- Projects are ranked in order of PI

Advantages of PI

- Easy to understand
- Time value of money taken
- Uses cash flow method
- Consistent with objective to maximise shareholders' wealth

Disadvantages of PI

- Doesn’t consider project duration
- Cost of capital is estimated
- Requires long term forecasts

INTERNAL RATE OF RETURN (IRR)

Internal Rate of Return (IR

- Another DCF method, also called rate of r time adjusted rate of return, yield on investment, marginal efficiency of capital marginal productivity of capital, etc.
- Rate of return is internal to the proposal b on outlay and cash flows unlike NPV-wh is external based on cost of capital.
- IRR is discount rate which equates aggreg PV of net cash inflows with aggregate of i cash outflows. It is the rate at which NPV

Advantages of IRR

- Recognises time value of money
- Easy to understand
- Indicates profitability.
- Consistent with overall objective of shareholders' wealth maximisation.

Disadvantages of IRR

- Tedious calculation
- Multiple rates
- Inconsistent in maximising shareholders' wealth
- Reinvestment of cash flows
- Ignore rupees of NPV

Types of feasibility stud

- Economic feasibility
- Technical feasibility
- Financial feasibility
- Managerial feasibility

MODEL PROJECT REPO