

INTRO TO MECH. ENG.

SEMM 1921

CHAPTER 10: ENGINEERING ENTREPRENEURIAL



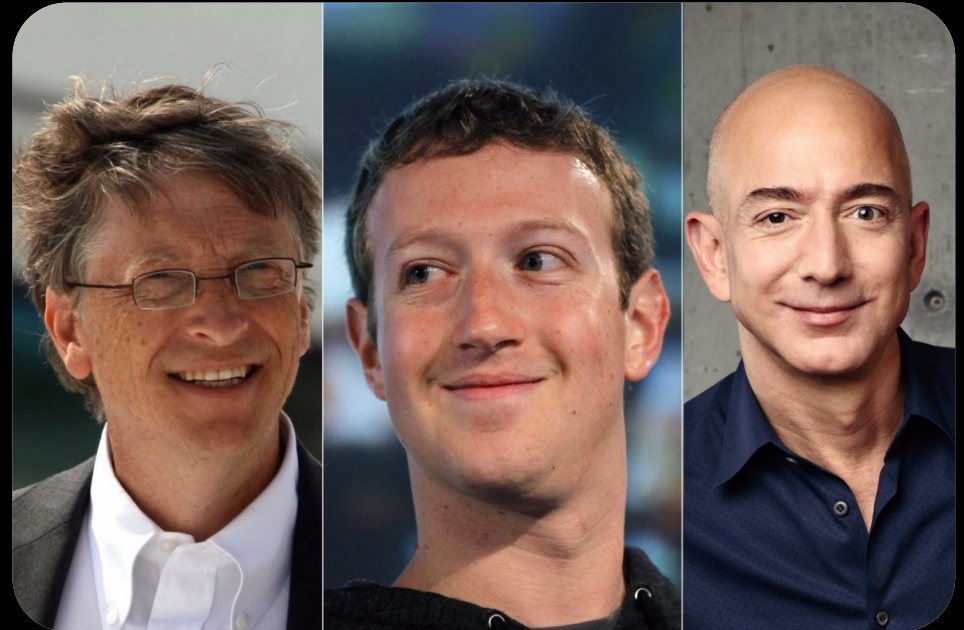
The background of the slide is a dark blue to black gradient. It features a complex pattern of thin, glowing blue lines that curve and sweep across the frame, creating a sense of motion and depth. Interspersed among these lines are numerous small, bright white dots, some of which appear to be the endpoints of the lines, resembling a starry sky or a network of data points.

CONTENTS

- Introduction
- Entrepreneur Competencies
- Concepts & Skills

1. Introduction

- Entrepreneurship
 - Is the process by which individuals pursue opportunities and put workable ideas into practice regardless of the resources they currently control. May be done by individual or group having willingness and risk taking.
- Entrepreneur
 - Perceives and exploit profit opportunities by introducing innovative , new or unique products or services.



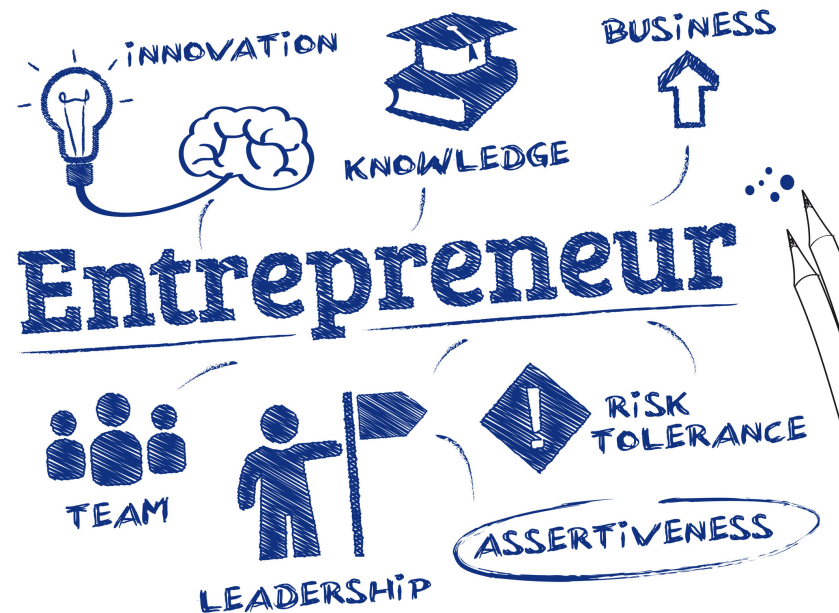
What is “Entrepreneurship”

is process of discovering new ways of combining resources.

is the process of starting a business, typically a start up company offering an innovative product, process or service.

Who is an Entrepreneur?

- More than just a business.
- A person who identifies opportunities and pursue it relentlessly, allocate resources and create value



...while an Engineer is

A professional who is involved in inventing, designing and maintaining a variety of machines, structures and data systems.

Engineers are also responsible for adhering to their employer's specifications for budget and timeline.



Journey of Hewlett Packard

William Hewlett & David Packard started from a garage.

Both engineers. Designed urinal.

Then produced audio oscillator (1939).

1st year sale USD 5,639, profit USD 1,563.

David then did accounting & business law.

From garage move to a building.

1996 HP went into computer business. First computer created.

1998 first desk top scientific calculator.

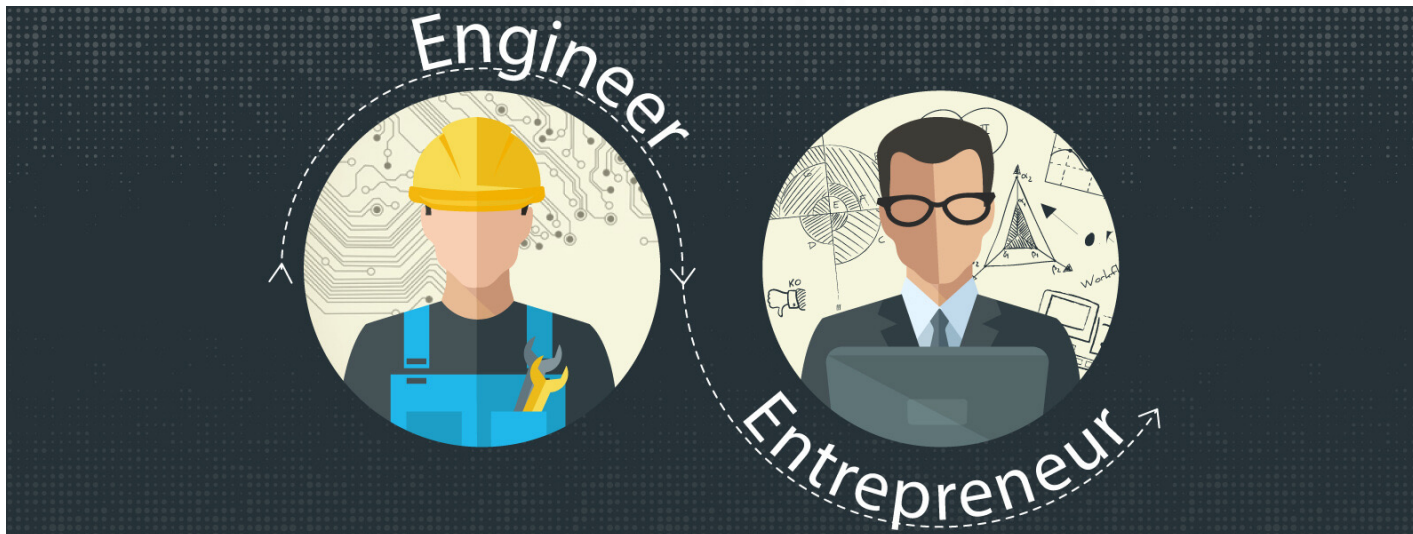


2. Entrepreneur Competencies

- Strategy
- Persuasion
- Assertiveness
- Self confidence
- Problem Solving
- Systematic Planning
- Efficiency Orientation
- High degree of commitment
- High quality of work
- Information seeking
- Persistence
- Opportunity orientation
- Initiative

Engineers who are business minded, or entrepreneurial, are:

- Individuals who understand the complexities of business problems and customer needs and build solutions to fix those problems
- These are engineers who can see the bigger picture and long term vision for a company, and who often go off to start their own businesses.



What Does it Takes to be an Entrepreneurial Engineer?

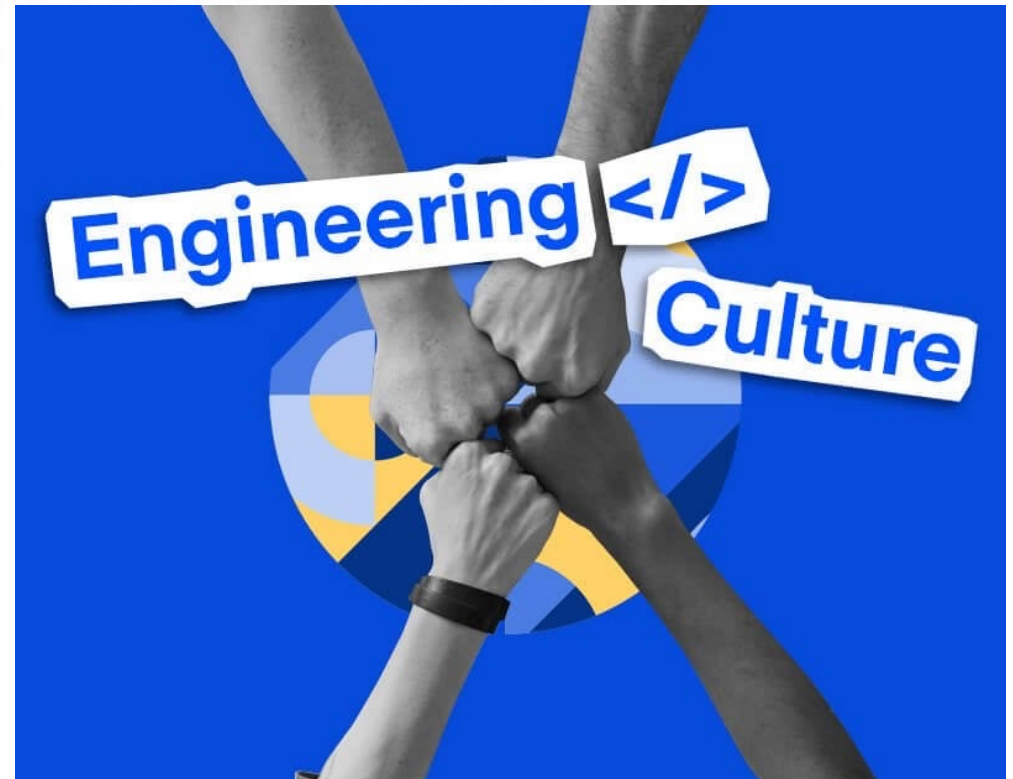
An engineering entrepreneur is required to have the capacity and willingness to harness, develop, organize, and manage the business venture conceived with an engineering idea and manage the risk involved painstakingly in order to make a profit.



3. Concepts & Skills

Culture

- Execution –make decision
- Impact –action focus
- Teamwork –working together , with each other, between each other and across each other.
- Quality –deliver high impact projects with quality (highest)
- Look at problem as opportunity.



Mind Set

- Always looking for opportunities and value creation.
- Able to look at bigger picture.
- Innovative
- Creative
- How engineer fits in the business.
- Easy communication/collaboration.
- Consider seniors as peers not superiors.
- Challenge the situation.



Productivity

Focus on three areas:-

- 40% of engineering time focus on project immediate impacts.
- 30% focus on objective key result (OKR).
- 30% focus on technical excellence and continued improvement.



Entrepreneurial Engineer
will Always look for opportunities
and value creation.



**Entrepreneurial
Engineer
Will Always look
for opportunities
and value creation.**

PROFIT



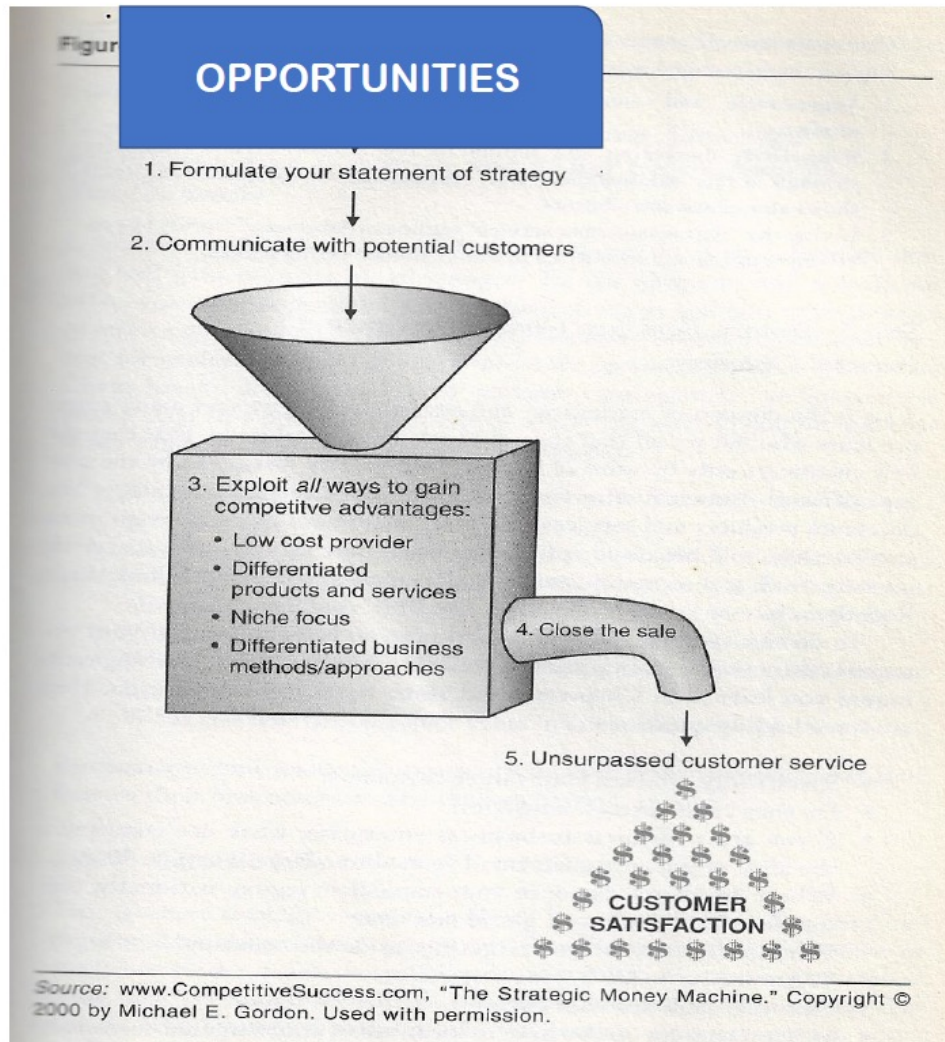
OPPORTUNITIES

- ❖ LOTS OF INDUSTRIES USES PIPING OF DIFFERENT MATERIAL, SIZES AND JOINTINGS.
- ❖ LOTS OF SECTORS USES PIPE SYSTEMS SUCH AS:
 - ❖ OIL & GAS
 - ❖ DEFENCE
 - ❖ MANUFACTURING
 - ❖ CONSTRUCTION
- ❖ CLIENTS WHO HAVE INSUFFICIENT FUNDS TO REPLACE PIPES BUT JUST NEED TO REPAIR THEM.

VALUE CREATION

This can be achieved through a management process of defining, creating, delivering and sustaining value. Value is ultimately Defined by customers, investors and other stakeholders

For pipe coupling – the value customers get is shorter down time.
Cost saving.
Continuous uninterrupted plant operation.



- Formulate Strategy
- Communicate with customers
- Exploit competitive advantage
 - Pricing
 - Excellence in product & services
 - Niche maintained
 - Differentiated
- Close deal
- Maintain after sales service

THANK YOU



In the Name of God for Mankind



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