

# Entrepreneurship for Computer Science MG -481

## **Introduction and Course Overview**

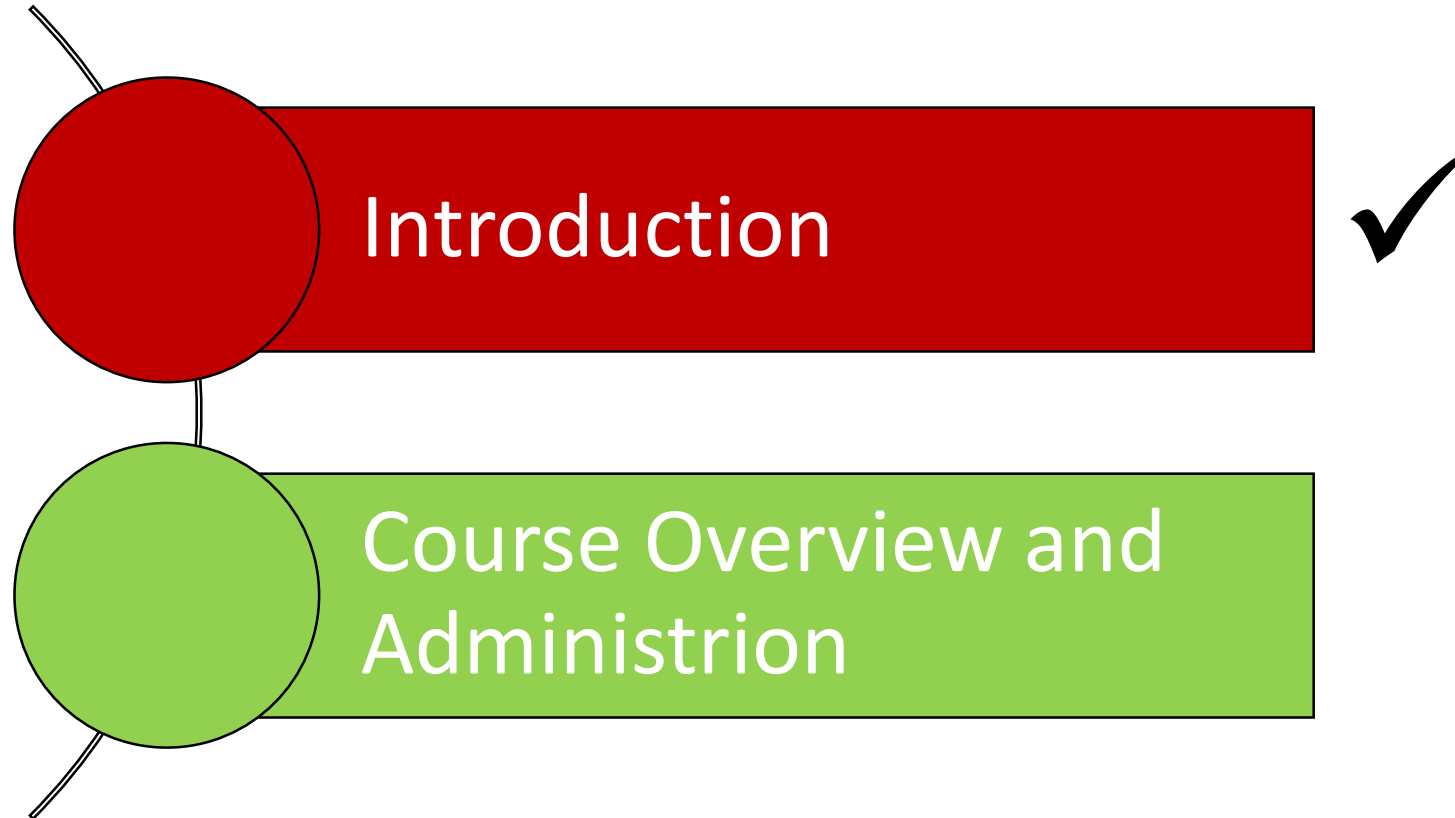
Lecture 1, February 27, 2024

Sehrish Huma

# Today...

- **Introduction:**
  - Definitions of startup, entrepreneurship, and entrepreneur
  - Types of entrepreneurship
  - Why startups usually fail?
- **Course overview:**
  - Objectives, topics, and learning outcomes

# Outline



# Why are you Interested in Entrepreneurship?

- You may have an idea that can change the world or improve an existing process you are familiar with
- You may have a technological breakthrough and want to capitalize on it (perhaps, by founding a *startup*)
- You may have a passion and want to learn about entrepreneurship while looking for a good idea, technology, and/or a partner

# Why are you Interested in Entrepreneurship?

I have a  
technological  
breakthrough!



I have  
an idea!



I have  
a passion!



In any of these cases, at this stage you may want simply to uncover the world of startups and entrepreneurship. If so, let us get started!

# What is a Startup?

- A startup is an **organization** designed to **innovate** a new product or service under conditions of extreme uncertainty (*“The Lean Startup” by Eric Ries*)
  - An **organization** encompasses mission, vision, strategy, hiring, accounting, finance, operations, etc.,
  - In this context, however, it operates under too much uncertainty, following *leap-of-faith assumptions* concerning its invention
- **Innovation** = Invention × commercialization
  - This implies that having a product does not mean you have a business

# The Single Condition for a Business

- The single necessary and sufficient condition for a business is *a paying customer*
- The day someone pays you money for your product or service, you have a business, and NOT the day before
- But, having a paying customer does not mean you have a *sustainable* business!
- To have a sustainable business, you need enough customers paying enough money within a reasonable amount of time

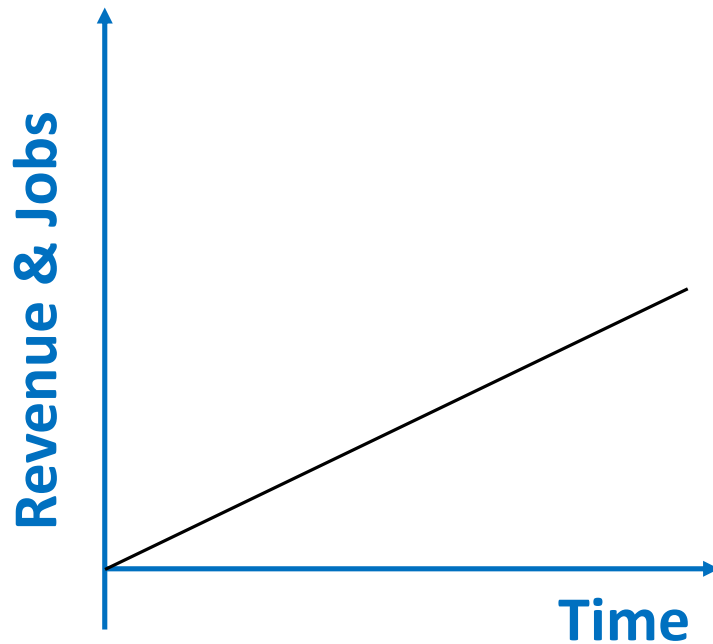
# Entrepreneurship

- Entrepreneurship is *the process* of creating a sustainable business
- There are two types of entrepreneurship
  - Small and Medium Enterprise (SME)
  - Innovation-Driven Enterprise (IDE)

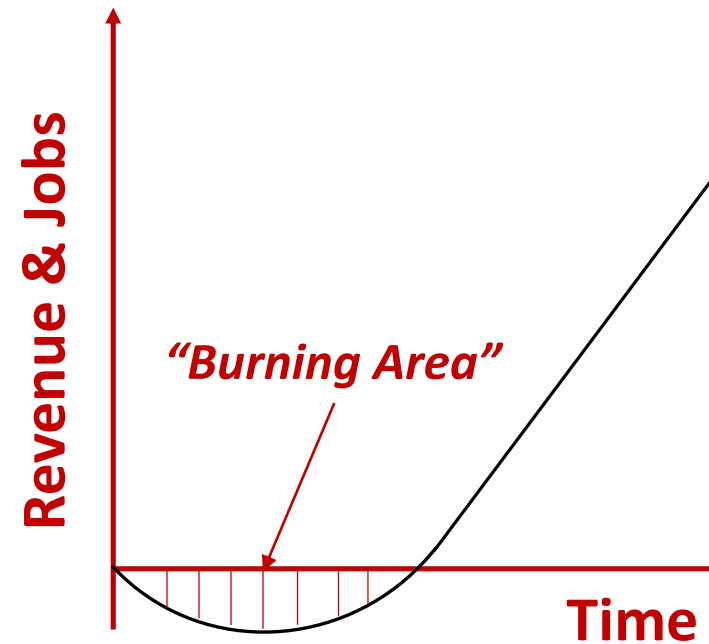
	SME	IDE
Market	Local and/or Regional	Regional/Global
Invention	Not Necessary	Necessary
Jobs	Non-tradable	Tradable
External Capital	Typically No	Yes
Growth	Linear	Exponential



# SME and IDE Expected Revenue & Job Trends

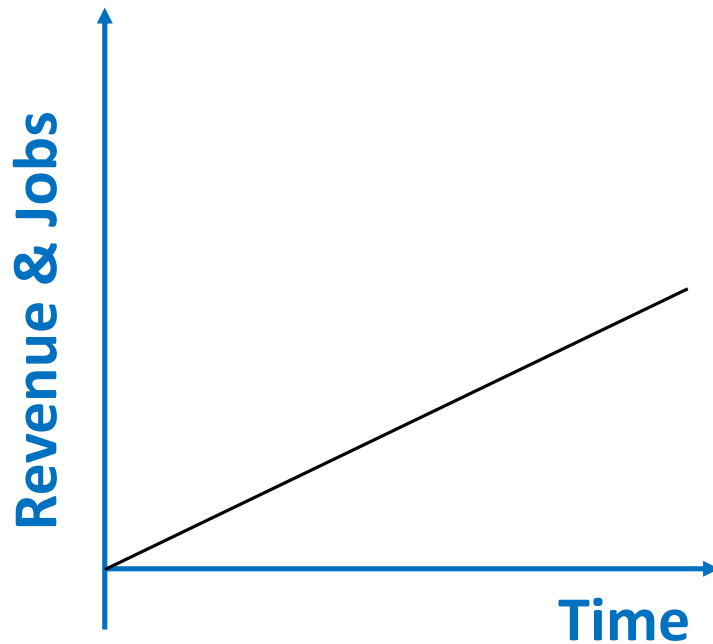


**SME:** Usually Not Risky

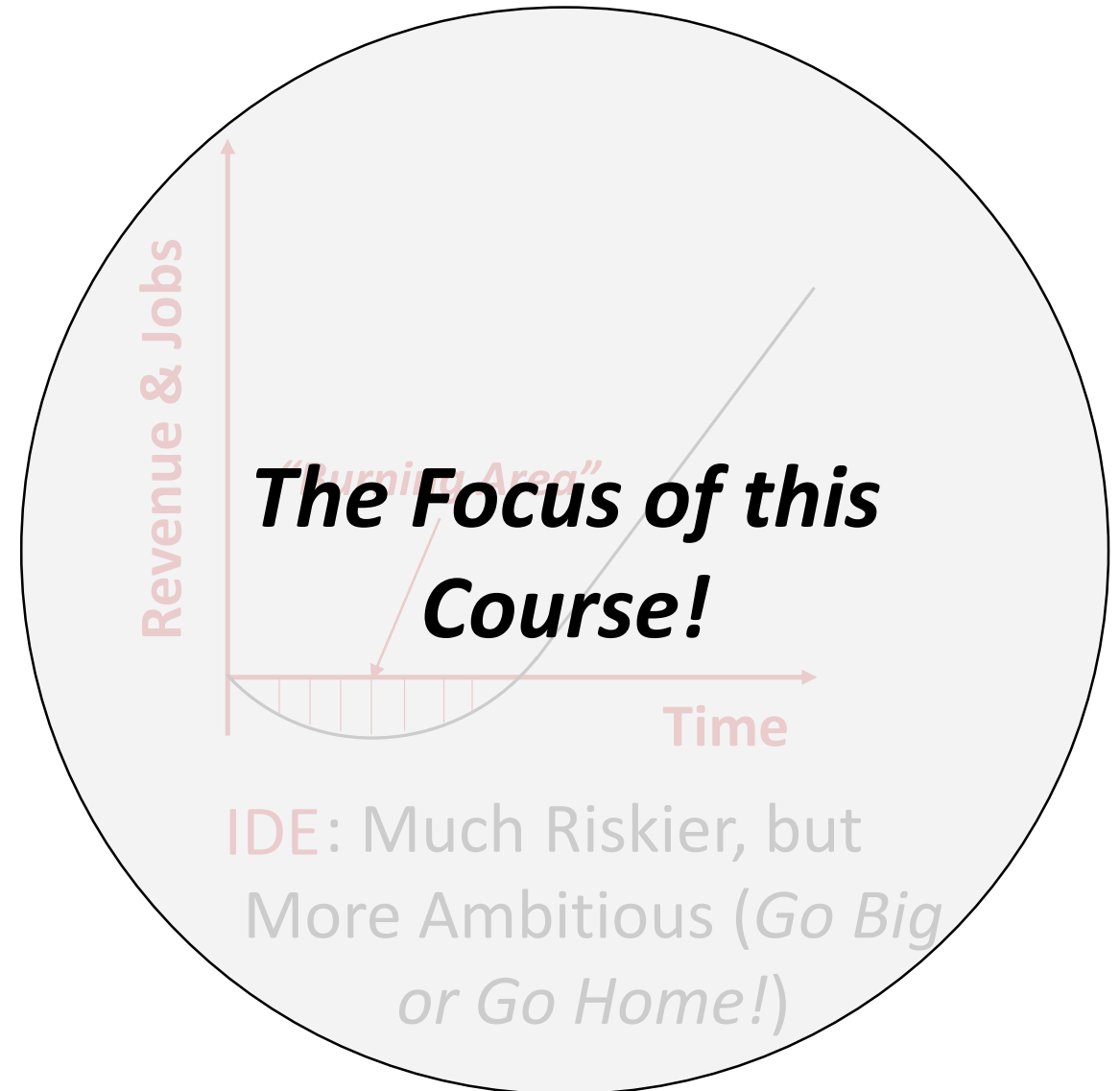


**IDE:** Much Riskier, but  
More Ambitious (*Go Big  
or Go Home!*)

# SME and IDE Expected Revenue & Job Trends



**SME:** Usually Not Risky



# Introduction to Entrepreneurship

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Entrepreneurship has become increasingly important for businesses of all sizes around the world.

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It opens new opportunities and possibilities for the businesses to create values for themselves and for the society at large.

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Despite its popularity, studies suggest that the scope of entrepreneurship remains unknown, and therefore the prospects of entrepreneurial activities remains not fully realised.

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This chapter highlights some aspects concerning the concept of entrepreneur, entrepreneurship, entrepreneurial process and finally the entrepreneurship opportunities and challenges.

# Who is an Entrepreneur?

- Anyone who creates a startup is an entrepreneur
  - This implies that an entrepreneur should have a (strong) appetite of risk taking
- But an entrepreneur needs not create a startup; she/he can operate inside “established” organizations
  - This entrepreneur is typically referred to as “intrapreneur”
- In addition, an entrepreneur does not need to invent!
  - E.g., Steve Jobs identified the computer mouse created by Xerox PARC and commercialized it effectively through Apple
  - E.g., Larry Page and Sergey Brin used AdWords (which was created by Overture Services, Inc) on their search results pages

# Definition of an Entrepreneur

To date, several definitions have been penned to describe an entrepreneur. And some of them are mentioned herewith:



Entrepreneur is someone who manages all the necessary resources to produce and market a product which responds to the market scarcity (Leibenstein, 1968; Bull & Willard, 1993).



“Entrepreneurs are individuals who recognize opportunities where others see chaos contradiction, and confusion. They are aggressive catalysts for change within the marketplace” Kuratko (2016, p.3)



“Entrepreneur is the person who carries out new combinations, causing discontinuity. The role is completed when the function is completed. The person may be an employee with an existing organisation or may start a new venture. An investor per se only risks capital for a return.” Bull & Willard (1993, p. 186)



# Characteristics of an Entrepreneur

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The main characteristics of the entrepreneur are due to their sociological and psychological factors. Some of those characteristics are mentioned below:

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Entrepreneurs are vision-oriented people

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Entrepreneurs have a high need in achievement

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Entrepreneurs do not rely on fate or luck, however they try to control their own lives

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Entrepreneurs undertake moderate risks, which is why they look for high earning on their investments

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Entrepreneurs have the abilities to deal with several ambiguous situations in their ventures. They face these ambiguous situations and circumstances regularly because they do certain jobs and tasks which are entirely new by nature.

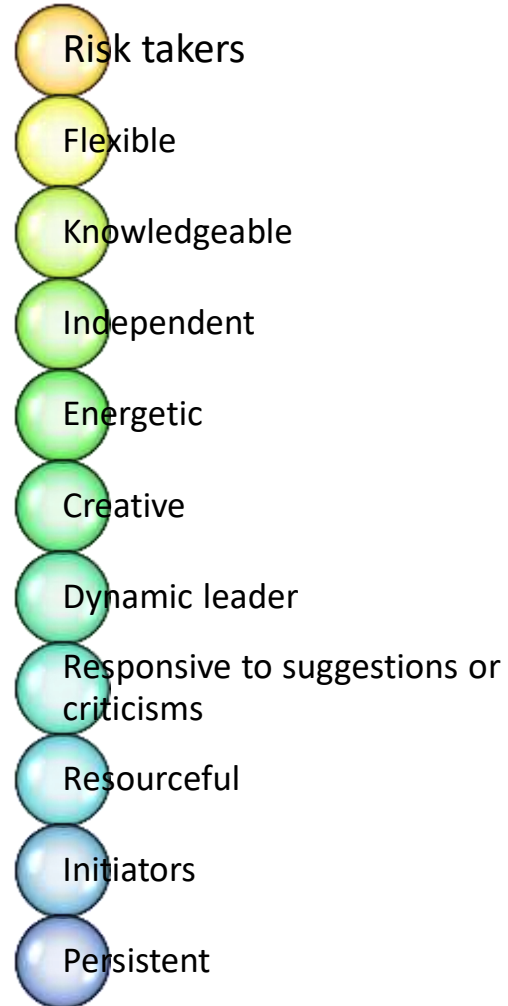
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Entrepreneurs have the tendency to be productive and efficient within a given period of time. However, at times, they might be seen as inflexible individuals in team-work.

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# Traits of an Entrepreneur


Some of the common traits of entrepreneurs are :



# Description of Entrepreneurship



Entrepreneurship is an “act of establishing a new venture” Christensen et al, (2000, p.4)



Entrepreneurship can also be considered as the function through which growth and development can be achieved without commencing a new business venture. It offers a process by which people either inside the companies or on their own, look for prospects without regard to the resources they presently control (Stevenson et al, 1989; Stevenson & Jarillo, 1990).



However, “an entrepreneurial organisation is that which pursues opportunity, regardless of resources currently controlled” Stevenson & Jarillo (1990, p.23).



# Definition of Entrepreneurship

“Entrepreneurship is the creation of organisations. What differentiates entrepreneurs from non-entrepreneurs is that entrepreneurs create organisation, while non-entrepreneurs do not. In behavioural approaches to the study of entrepreneurship, an entrepreneur is seen as a set of activities involved in organisation creation, while in trait approaches an entrepreneur is a set of personality traits and characteristics” Gartner (1988, p.11)

# TYPES OF ENTREPRENEURSHIPS

- Small Businesses



# TYPES OF ENTREPRENEURSHIPS

- Online Business



# TYPES OF ENTREPRENEURSHIPS

- Home-based business

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**“I started my own business from home because I want to meet new challenges, discover my true potential, find a more rewarding life...but mainly because I like to sing along with the radio real loud!”**

## TYPES OF ENTREPRENEURSHIPS

- Large company entrepreneurship is the process of established companies innovating new products, services, and ideas based on market considerations. Large company entrepreneurship aims to reinvent an existing brand to make it more valuable and relevant to the current marketplace.
- As a large company's products near the end of their [product life cycles](#), the company can innovate by bringing new products to market that meet changing consumer demand. Companies like Disney and Samsung use large company entrepreneurship to stay competitive, rolling out new product lines to ensure that consumers stay loyal.

## TYPES OF ENTREPRENEURSHIPS

- [Social entrepreneurship](#) involves a business model designed to address a particular social issue. Social entrepreneurs seek innovative solutions to problems in our society, including pollution, poverty, and student debt. By allocating time and money toward socially responsible goals like equitable economic development or wildlife conservation, social entrepreneurs may prioritize a triple bottom line that focuses on profit, people, and the planet.
- Social entrepreneurship can exist within a nonprofit organization as well as a for-profit business venture. An example of [social entrepreneurship](#) is [LSTN Sound Co.](#), an audio company founded in 2012. Since then, LSTN Sound Co. has provided hearing aids to over 50,000 people worldwide by partnering with the nonprofit Starkey Hearing Foundation.

# The Startup Realty

- The grim reality is that most startups fail
- There are five essential elements that lead to successful startups



**IDEA**



**TEAM &  
Execution**



**BUSINESS MODEL**








**FUNDING**



**TIMING**

# What Makes Startups Succeed?








Idea	Team	B M	Funding	Timing
				
10	9	8	6	10

**Ranks over 10**



Idea	Team	B M	Funding	Timing
				
8	9	5	4	9



Idea	Team	B M	Funding	Timing
				
8	10	7	7	10

Succeeded 😊



# What Makes Startups Succeed?

friendster®

kozmo.com

webvan

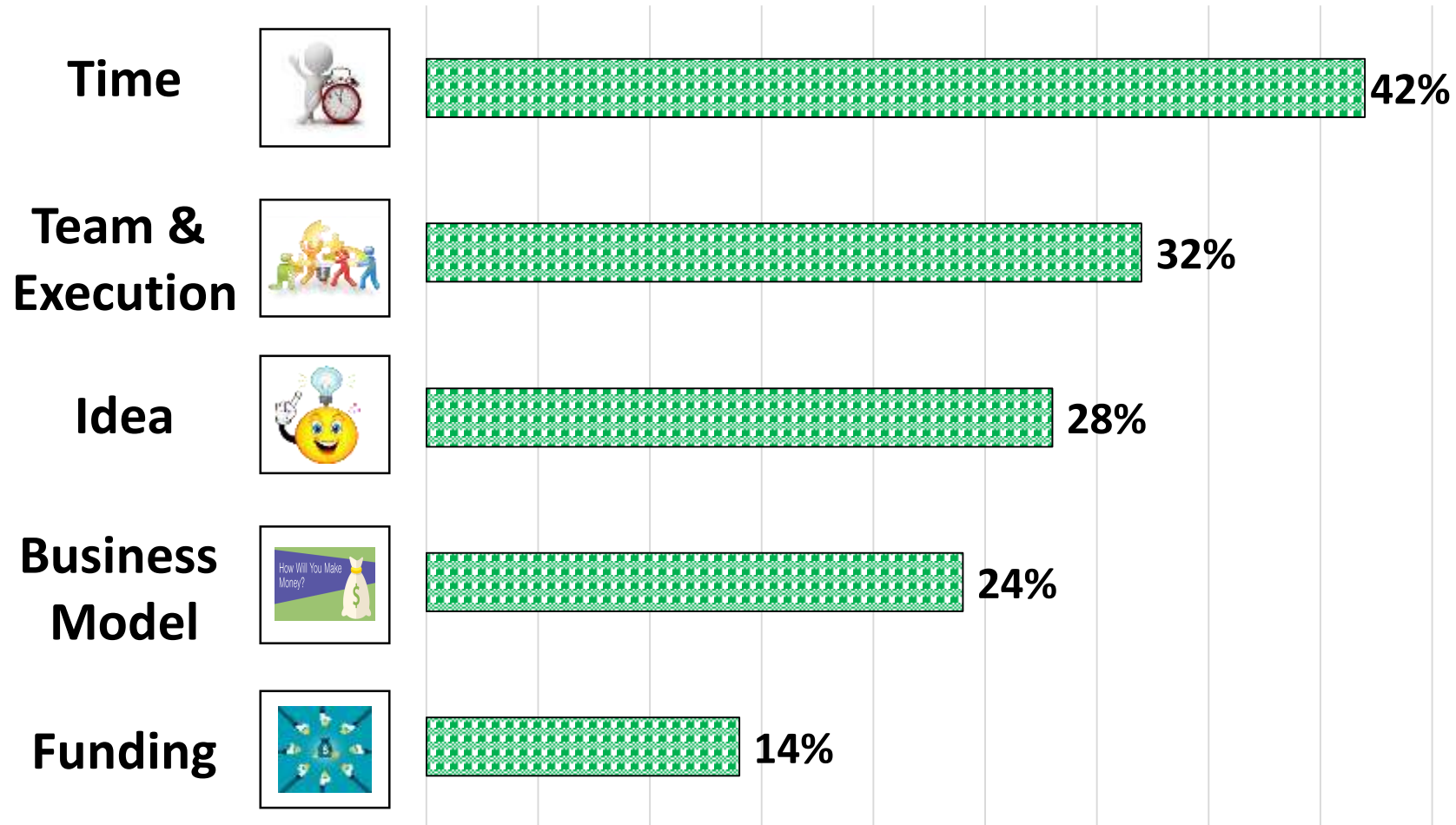
Idea	Team	B M	Funding	Timing
				
8	5	4	6	6

Idea	Team	B M	Funding	Timing
				
4	5	6	10	4

Idea	Team	B M	Funding	Timing
				
4	5	6	10	4

Failed 🙄

# What Makes Startups Succeed?



**Factors of  
success  
across  
more than  
200  
companies**

[Based on a study by IdeaLab]

# Assessment Methods

- How learning will be measured?

Type	Weight
Projects	15%
Exams	60%
Midterm	20%
Quiz	5%