

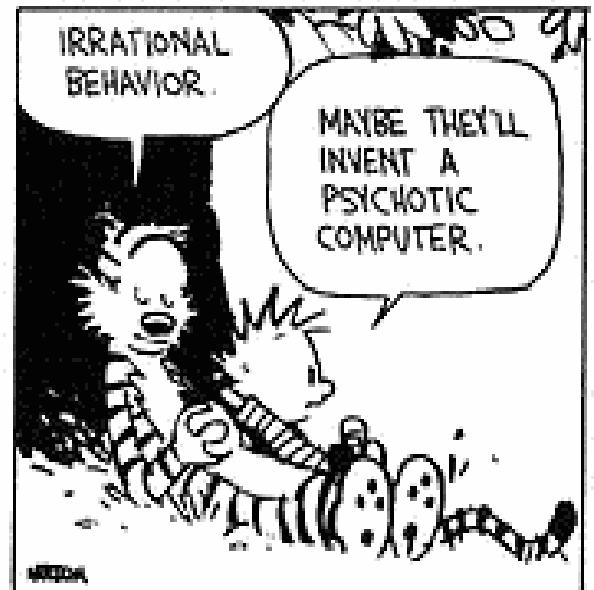
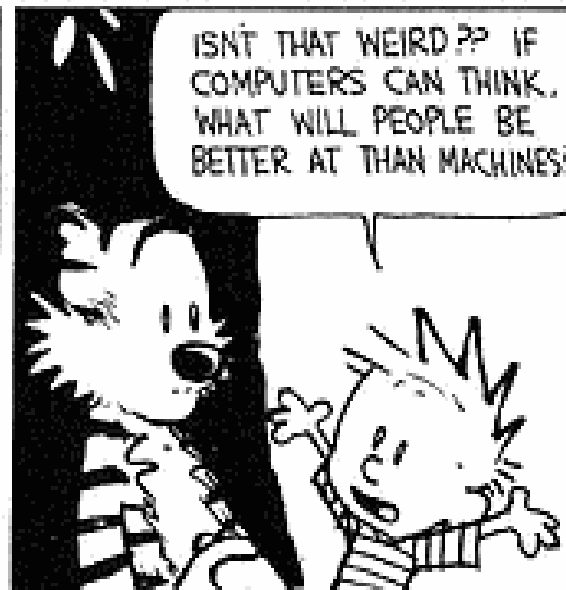
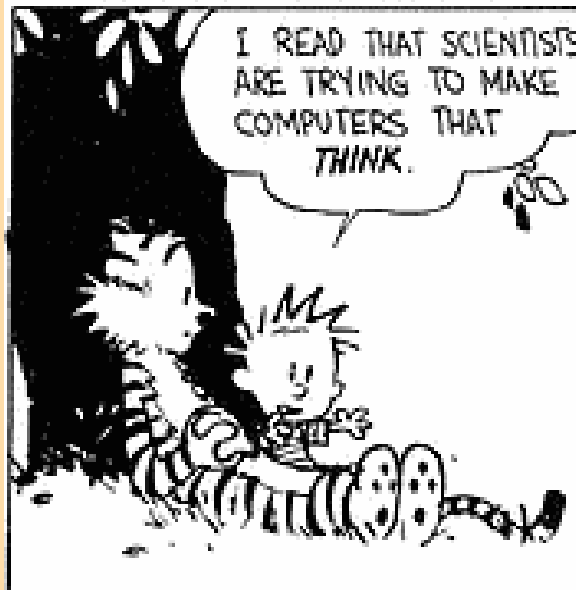
# FUNDAMENTAL OF TECHNOPRENEURSHIP (UCSD2762)

## Chapter 2 Technology, Innovation and Creativity

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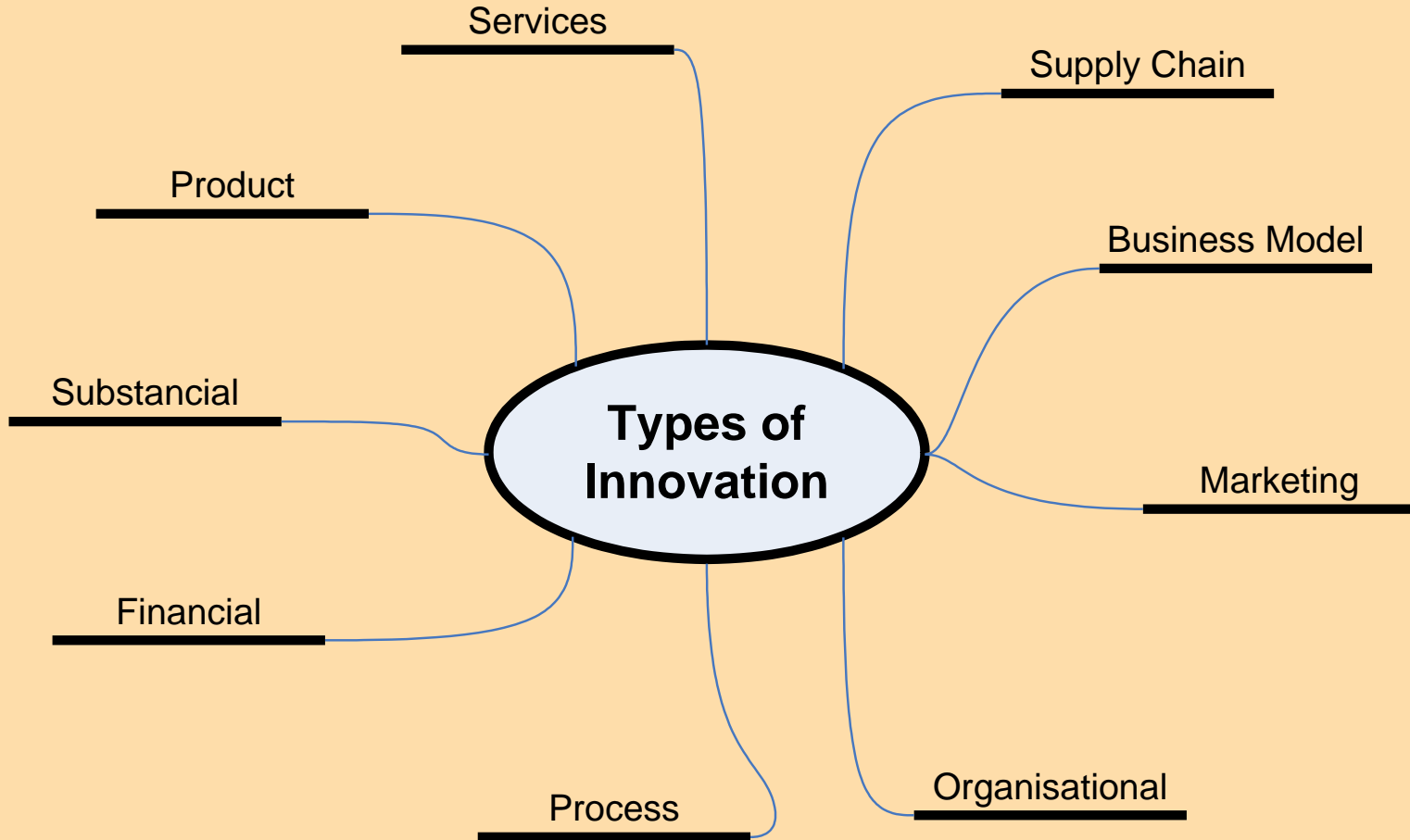
# Chapter Objectives

1. Explain innovation and its importance to technopreneurship;
2. Identify the different type of innovation;
3. Differentiate between innovation and invention;
4. Explore the the world innovation landscape;
5. Understand the innovation success & failures;
6. Explain the failure in innovation;
7. Identify the five steps in the creative process

# Innovation

- A new idea, method or device
- The process of making improvements by introducing something new
- The process of translating new ideas into tangible product
- The successful exploitation of new ideas
- A creative idea that is realized
- Change that creates a new dimension of performance

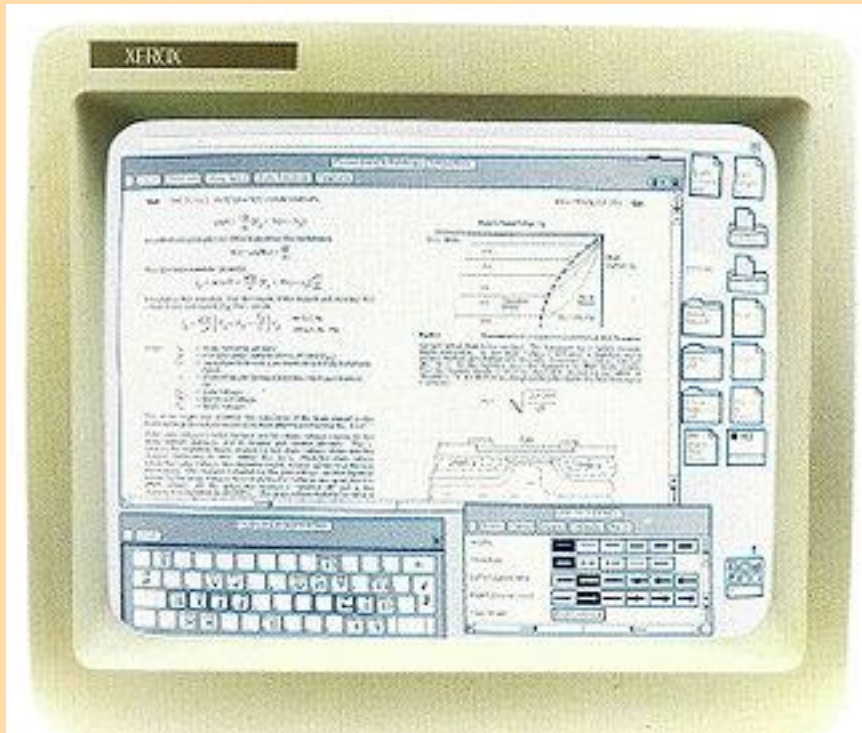
# Types of Innovation



# Innovation vs Invention

- *Invention* is the first occurrence of an idea for a new product or process
- *Innovation* is the first attempt to carry it out into practice.
- Actualization or realization of an invention whether it be a societal benefit, commercialization, market entry or monetization

# Innovation vs Invention



# Global Innovation Index (2011)

- |                 |                       |
|-----------------|-----------------------|
| 20. Japan       | <b>10. UK</b>         |
| 19. Austria     | <b>9. Netherland</b>  |
| 18. Norway      | <b>8. Canada</b>      |
| 17. Luxembourg  | <b>7. USA</b>         |
| 16. Korea       | <b>6. Denmark</b>     |
| 15. New Zealand | <b>5. Finland</b>     |
| 14. Israel      | <b>4. Hong Kong</b>   |
| 13. Ireland     | <b>3. Singapore</b>   |
| 12. Germany     | <b>2. Sweden</b>      |
| 11. Iceland     | <b>1. Switzerland</b> |



# Global Innovation Index (2011)

Malaysia?

**31**

# Fast Company Most Innovative Company 2010

20. Disney

19. GE

18. IBM

17. Cisco

16. BYD

15. Sportify

14. Intel

13. Nike

12. Netflix

11. Hulu

**10. HP**

**9. Walmart**

**8. Novartis**

**7. PG&E**

**6. First Solar**

**5. Huawei**

**4. Google**

**3. Apple**

**2. Amazon**

**1. Facebook**

# Facebook

THE ESSENTIALS

WHEN FOUNDED  
2004

HEADQUARTERS  
Palo Alto, CA

CEO  
Mark Zuckerberg

NUMBER OF EMPLOYEES  
1000+

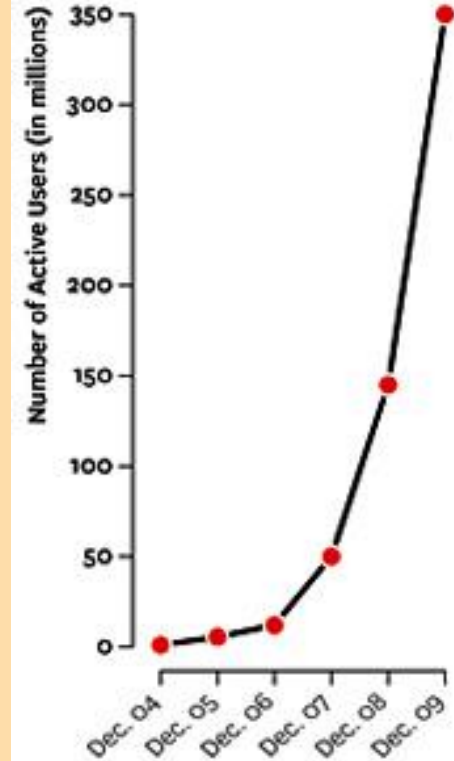
More

## Facebook

**TOTAL REVENUES FOR MOST RECENT FISCAL YEAR**  
\$500 million (estimated)

**WHAT THE COMPANY IS MOST FAMOUS FOR**  
Developing Facebook.

**WHY IT'S INNOVATIVE**  
With more than 350 million users around the world, Facebook has become the platform of choice for major brands, political candidates, scrapbooking moms, and social causes looking to "engage" and "converse" rather than merely "sell" and "broadcast."



### Tower of Power

Facebook crossed 350 million users last year, exceeding the company's target. The next dragon on its list? Google.

# Innovation Success



# Innovation Success





# Innovation Success



# Innovation Success



# Apple Greatest Innovation



# Innovation Success – The I Era

“What made the **iPod** truly innovative was its combination of ***aesthetic design, elegant ergonomics*** and ***ease of use***. Also, there was the creation of the **iTunes** that enabled listeners to integrate with their **iPod**. It is the combination of all these elements that made the iPod truly innovative”

# Innovation Success

*Secret Recipe*®



# Innovation Failure – Apple Newton



Arguably ahead of its time, Apple debuted this PDA device in 1993. Computerworld says it flopped partially because of its **high price** (\$700 or more), **bulkiness** and the **inaccuracy of the handwriting recognition.**

The Newton faded away in 1998, but chartered the course for the Palm Pilot in the late 90's and the popular BlackBerry & iPhone today.

# Innovation Failure – Pepsi Am and Crystal



In the late 1980s, Pepsi came up with the brilliant plan to cater to the breakfast cola drinker, under the **assumption** that because Pepsi contained caffeine, it must be a natural substitute for coffee. Well, you know what they say about assumptions - but needless to say, Pepsi AM was not successful, and neither was Pepsi's later foray into clear cola, Crystal Pepsi. Apparently, when it comes to cola, the consumers know what they want -- they want it brown, and they want to drink it all day long.



# Innovation Failure – Aspirin



Ben-Gay cream is great for topically relieving aches and pains. But the idea of **swallowing Ben-Gay**? Not so appealing. That was the problem the company faced when they tried to launch an aspirin. Their first brand extension, Ultra-Strength Ben-Gay, was essentially the same product as the original and was very successful. The aspirin? Not so much.

# Innovation Failure – Millenium Dome



The concept behind the Millennium Dome wasn't bad. The beginning of another millennium is a pretty big deal, so why not celebrate it in a very expensive new building at the exact location where the millennium began? Only one problem -- **no one was interested in going.**

# Innovation Success or Failure?





# Failure in Innovation – Nokia N-Gage





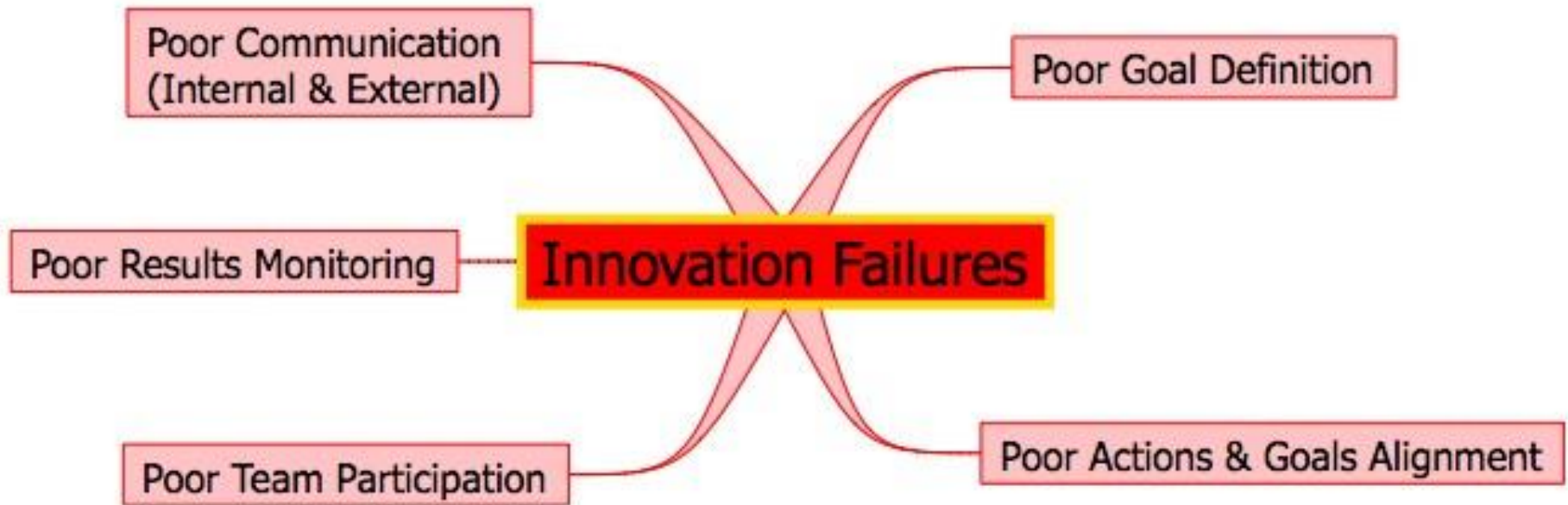
# Why N-Gage Failed?



# Why N-Gage Failed?



# Common Causes of Innovation Failure



# How to Promote Innovation?

- All innovation begins with creative ideas ....  
*innovation as the successful implementation of creative ideas.*
- Creativity by individuals and teams is a *starting point for innovation*
- *Creativity is necessary but not sufficient condition for the innovation*

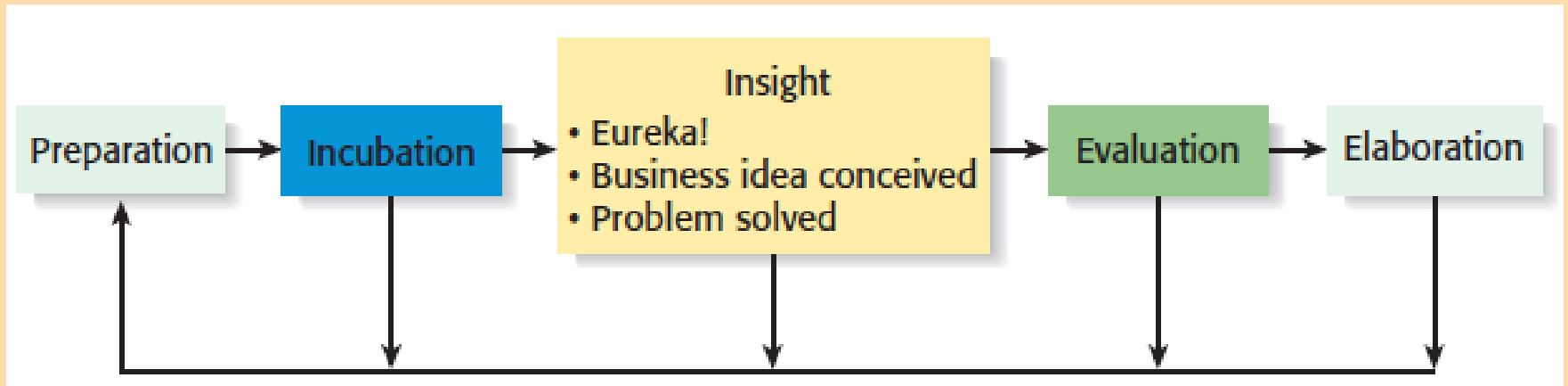
# Innovation and Creativity

- *Creativity*
  - coming up with ideas
  - displayed by individuals
  
- *Innovation*
  - bringing the ideas to life
  - occurs in the organisational and societal context.

# Creativity

- ... is the process of generating a novel or useful ideas
- Opportunity recognition may be, at least in part, a creative process
- For an individual, the creative process can be broken down into five stages, as shown on the next slide.

# Steps to Generate Creative Ideas



# Summary

1. What is innovation and its importance to entrepreneurship;
2. Different type of innovation.
3. Innovation vs invention;
4. Innovation ranking – nations and companies;
5. How innovation succeed & fails;
6. How to promote innovation;
7. Innovation and creativity;
8. Five steps in the creative process.