



CSE3PPE / CSE5003

Professional Practices and Entrepreneurship in I.T

Lecture 1

Semester 1, 2024

Welcome!



Subject

Description

What is the purpose of this subject?

This subject provides an outline of

- entrepreneurship and its application in I.T.,
- ethics in professional practice, and
- skills to help you thrive in industry.

These will be presented in two key parts:

Part A (weeks 1-6): Entrepreneurship focus

Part B (weeks 7-12): Professional practices focus

Elements in each will overlap.

Subject Intended Learning Outcomes (SILOs) – CSE3PPE

SILO 1	Evaluate diverse funding options for supporting entrepreneurial endeavours while considering the essential development steps.
SILO 2	Critically analyse IT business ventures based on social, legal and ethical issues and examine the responsibilities of IT professionals to employers, clients, and society as part of a team.
SILO 3	Reflect on personal viewpoints related to managing relationships and individual entrepreneurial capacity, effectively developing and presenting personal and professional reflections to become career ready.
SILO 4	Apply ethical theory to analyse ethical dilemmas in IT and business through debate.

Subject Intended Learning Outcomes (SILOs) – CSE5003

SILO 1	Examine various types of resources to develop and finance an entrepreneurial venture
SILO 2	Write, express and present a business plan that will be ready for venture capitalist review by collaborating in a team
SILO 3	Reflect on personal viewpoints related to managing relationships and individual entrepreneurial capacity, effectively developing and presenting personal and professional reflections to become career-ready
SILO 4	Create a personal ethical framework for IT practice that incorporates awareness of cultural and global issues and apply ethical theory to analyse ethical dilemmas in IT and business using a comprehensive approach.

Learning approaches

Theory

Reflections

Guest
speakers

Case studies

Group work

Speaking to
people

Topics covered



INTRODUCTION TO
I.T.
ENTREPRENEURSHIP



OPPORTUNITY
RECOGNITION



BUSINESS MODELS
AND THE LEAN
CANVAS



FINANCING
ENTREPRENEURSHIP



ETHICS THEORY



CVS AND INTERVIEWS



COMMUNICATION
AND INTERCULTURAL
COMMUNICATION



DECISION MAKING
AND CONFLICT
MANAGEMENT

Resources

LEARNING RESOURCES & TECHNOLOGIES

Resource Type	Title	Author and Year	Publisher
Required			
Book	Running Lean, Second Edition	Ash Maurya 2012	O'Reilly
Recommended			
Youtube channel	The Fitzroy Academy	Will Dayble 2019	YouTube
Book	Technology Entrepreneurship: Taking Innovation to the Marketplace, Third Edition	Thomas N. Duening Robert A. Hisrich Michael A. Lechter 2020	Academic Press
Book	Ethics in Information Technology, Sixth Edition	George Reynolds 2019	Cengage
Book	The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company	Bob Dorf Steve Blank 2020	John Wiley & Sons



Semester Schedule

Week/ Session	Learning Activity	Contact hours
1	Introduction to Entrepreneurship	2
2	The role of entrepreneurship and problem solving in business	4
3	Lean Model Canvas; identifying earlyvangelists	4
4	Value propositions, channels, and unfair advantage	4
5	Cost structures and revenue streams	4
6	Financing start-ups and exit strategies	4
7	Semester Break	-
8	An introduction to ethics	4
9	Ethics and I.T.	4
10	CVs and Interviews	4
11	Communication and intercultural communication	4
12	Decision making and conflict management	4

Assessments – CSE5003

Assessment Element	Week/s due	%
Creating a Business Plan and Presenting a Pitch (equivalent to 2000 words/student)	Weeks 4 & 6	45
Ethical Case Study Assignment: Exploring Ethical Dilemmas in Scenarios (Equivalent to 1500 Words)	Week 8	30
Employment Preparation Task: Interview Simulation with CV, Cover Letter, and LinkedIn Profile Enhancement (Equivalent to 1500 Words)	Week 12	25

Assessments – CSE3PPE

Assessment Element	Week/s due	%
Developing a business plan and delivering a pitch (equivalent to 1500 words/student)	Weeks 4 & 6	45
Scenario based ethics case study (equivalent to 1500 words)	Week 8	30
Employment preparation task (equivalent to 1200 words) Resume and Cover letter, Interview questions.	Week 12	25

Tutorials/workshops/practicals

Tutorial Time – Please check LMS

These commence from week 2

Attendance at these are recorded

Email your tutor prior to the workshop if you cannot attend, providing reasons.

How to pass the subject:

1. Attend all lectures and workshops
2. Challenge yourself to consider different perspectives and ideas
3. If you are unsure of anything – ask! We are here to help
4. Ensure all assignments meet the requirements of the assignment rubric

Group work

- Forms a large component of your grade
- Fast tracks the learning experience
- Reflects life: industry consists of group work every day
- Success depends on mutual respect and understanding
- Ask yourself:
 - How can I contribute here?
 - How can we bring out the best in each other?
 - Underperforming team members risk loss of marks

Tips for working in teams

- Get to know each other: what does everyone have going on? When can people work on assignments together? What is the best way to bring out the best in every team member?
- Understand the grade motivation for each team member: an A? or just a pass?
- Find out the best time (that suits every team member) to meet regularly
- Communicate with your team members as much as possible (set up a WhatsApp/Signal group)
- Utilise the student resources available through La Trobe (such as Office 365)
- Manage your time: be aware of the assignment deadlines and submission requirements
- Nominate a team member to liaise with your lecturer
- Be open to change: new ideas, new directions, new challenges
- Enjoy the journey!

Lecture 1

Entrepreneurship



Who invented bread?



Defining Entrepreneurship

Historical context

The first known definition of entrepreneurship is by an Irish-French economist Richard Cantillon (circa 1730) is *self-employment of any sort*. Entrepreneurs buy at certain prices in the present and sell at uncertain prices in the future. The entrepreneur is a *bearer of uncertainty*.

Context today

Today, entrepreneurship can be defined as *“the process of identifying, developing, and bringing a vision to life. The vision may be an innovative idea, an opportunity, or simply a better way to do something. The end result of this process is the creation of a new venture, formed under conditions of risk and considerable uncertainty.”¹*

¹ Definition provided by The Entrepreneurship Centre, University of Miami, USA

Entrepreneurship process

Entrepreneurship process involves all the functions, activities, and actions associated with perceiving opportunities and creating organisations to pursue them.

These include:

- Team Building
- Market & customer research
- Product & service innovation
- Securing finance
- Finding & managing resources
- Managing intellectual property/ies
- Leadership

What is an Entrepreneur?

An Entrepreneur:

A person who organises and manages an enterprise, especially a business, usually with considerable **initiative** and **risk**.

- *Initiative*: Readiness and ability in initiating action.
- *Risk*: The hazard or chance of loss.²

Entrepreneurs will undertake managerial roles in their activities, but **routine management of an ongoing operation** is usually not considered to be entrepreneurship.

You can also consider an Entrepreneur as someone who perceives an opportunity and builds an organisation to pursue that opportunity.

²Webster's College Dictionary (Random House / McGraw Hill)

When you think of an Entrepreneur, who comes to mind?



Or do you think of someone like this as an Entrepreneur?



Schumpeter



Who can be an Entrepreneur?

Anyone can.

But it helps to have these attributes and factors:

Personal Attributes

- Higher internal locus of control
- Desire for financial success
- Desire to achieve self-realization
- Desire for recognition
- Joy of innovation
- Risk tolerance
- Ten D's of an Entrepreneur
 - Dream
 - Decisiveness
 - Does
 - Determination
 - Dedication

Environmental Factors

- Local, regional, or national attitudes
- Social and cultural pressures for or against risk taking
- Access to entrepreneurial role models
- Responsibilities to family and community
- Opportunities in the market/s

Remember:

No single type of person is best suited for entrepreneurship.

Entrepreneurs come from all walks of life!

Before committing, Entrepreneurs should:



Assess their own financial reality

Live with little or no salary?

What external financial commitments are there?



Identify key contacts in their networks

Take an inventory of the resources in one's network



Reach out to sources for free advice and feedback

Who can help or advise?

Risk vs Reward

Rewards

- Be your own boss!
- Do something you enjoy
- Be creative
- Set your own schedule
- Have job security
- Potential to make more money
- Be recognised in the community
- That amazing feeling of solving a problem that you identified was not being addressed by the market

Risk

- Work long hours
- Have an uncertain income
- Be fully responsible for everything, including your employees, suppliers, customers, and meeting your investor needs
- The very real possibility of losing the money you (and potentially others such as friends, family or investors) have invested

Common Myths

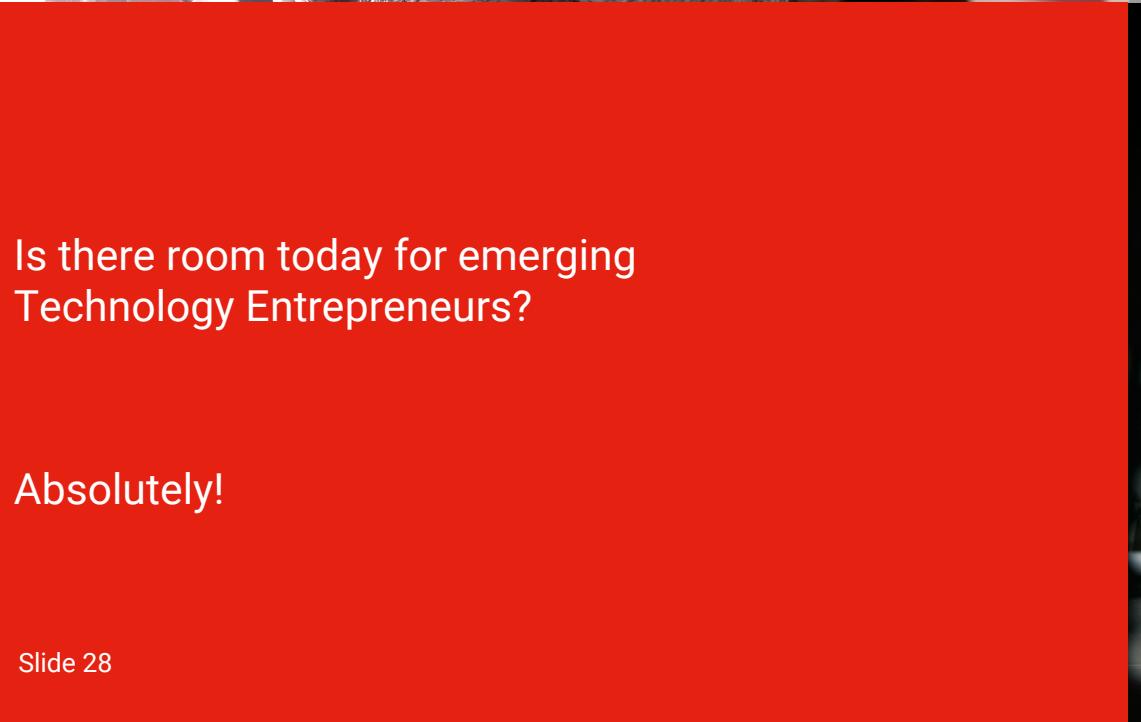
- Entrepreneurs are born, not made
- Entrepreneurs are gamblers
- Entrepreneurial success is ‘self-made’
- Money is the key to entrepreneurial success
- You have to be young to be an entrepreneur
- You must have a degree in business to be an entrepreneur

There's no such thing as a “self-made” millionaire.



@ethicsinbricks

Source: Twitter @ethicsinbricks



Is there room today for emerging
Technology Entrepreneurs?

Absolutely!



Disruption

Despite the dominance of big companies in many technical industries, there continues to be opportunities for technology entrepreneurs.

'Disruption' is a business management concept where new emerging players or concepts enter into existing or well controlled markets in a way that changes existing business rules (or the 'culture' within the sector).

Examples of disruptive innovations:

- The **mobile phone** disrupted the phone communication industry, eventually replacing landlines
- **Uber** disrupted the taxi industry, by expanding the market offering and enabling greater access to taxi services. In doing so, it also enabled anyone to become a 'taxi driver'
- **Ramen noodles** disrupted home cooking, enabling people to access cheap and easy-to-prepare meals

Contributing factors for disruption

Market is dominated by one or only a few players.

These companies enjoy large profit margins.

Existing solution might be dated or problematic.

Customer frustration with existing market offerings.

Customers feeling unheard or their needs are not being met.

Can occur in any industry.

What are some disruptive examples in the field of Information Technology?

Case Study: Zero Latency

In 2013 Melbourne based friends Tim Ruse, Kyel Smith and Scott Vandonkelaar and virtual reality (VR) enthusiasts realised there was an opportunity to reduce barriers for people to enjoy free-roaming VR experiences (FRVR). At the time VR was considered to have strong potential but was limited in its growth due to the significant set up costs. Most VR platforms were built around single user concepts, with multiplayer experiences considered unviable.

The founders combined emerging motion tracking technology and Oculus headsets with a platform for building content to enhance the experience for multiple users. In 2014 they formed the company Zero Latency and combined crowd funding and funding rounds to raise the finance (estimated US\$8.9million (crunchbase 2021)) that enabled their vision to be realised (Powell 2017).

As first movers in this space the company enjoyed initial growth and strong interest in expansion. As others saw the potential of the concept, competitors began to emerge. Zero Latency helped to counter this by monetising access to their platform as a software-as-a-service concept.

Crunchbase (2021) Zero Latency. Retrieved August 31 2021 from <https://www.crunchbase.com/organization/zero-latency>

Powell, D. (2017) Zero Latency co-founder Time Ruse on how he turned a "hobby" into a \$12 million virtual reality business, and the unexpected pressures of success, Smart Company, <https://www.smartcompany.com.au/entrepreneurs/influencers-profiles/zero-latency-co-founder-tim-ruse-turned-hobby-12-million-virtual-reality-business-unexpected-pressure-success/>

Case Study: Zero Latency

As of January 2022 Zero Latency offers FRVR multiplayer experiences across 55 venues in 26 countries (Wikipedia 2022), as well as providing a software-as-a-service option for access to their systems (Powell 2017).

In August 2021 it was announced that an Australian private equity firm Advent Partners had purchased a controlling share of Zero Latency for an undisclosed amount (Mosqueda Jr. 2021).

Mosqueda Jr. M. (2021) Australian PE Advent Partners takes control of VR gaming firm Zero Latency. In Deal Street Asia. Retrieved August 31 2021 from <https://www.dealstreetasia.com/stories/advent-partners-zero-latency-255686/>

Wikipedia contributors. (2021). Zero Latency (company). In Wikipedia, The Free Encyclopedia. Retrieved on July 19, 2022, from [https://en.wikipedia.org/wiki/Zero_Latency_\(company\)](https://en.wikipedia.org/wiki/Zero_Latency_(company))

Case Study: Canva



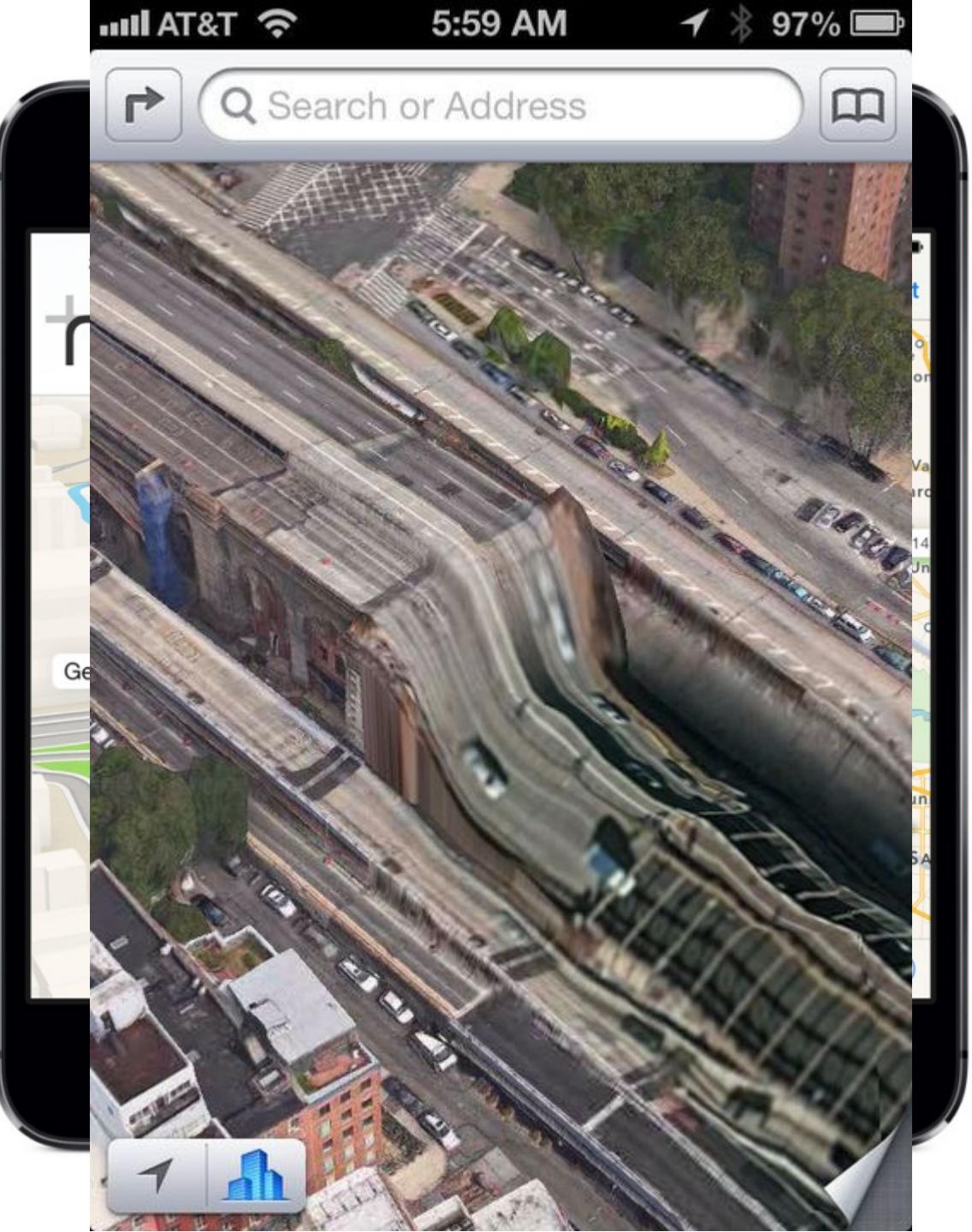
Apple Maps

Value Proposition:

- The exact same as Google maps

Why it failed:

- Slow speeds
- Inaccurate mapping data
- Incorrect directions
- Failure to estimate level of infrastructure required to compete with Google maps



Microsoft

Spot watch

Value Proposition:

- First Smartwatch! (2004)
- Internet connection
- Email
- Weather information
- Text messages

Why it failed:

- Required a subscription
- Stopped working if you left your area code



Sinclair c5

Value Proposition:

- Safe & reliable
- No license needed
- No road tax
- Electric vehicle
- Environment friendly
- Portable & space friendly

Why it failed:

- Too slow
- Poor weather endurance
- Awkward control structure



Google Glass

Value Proposition:

- A smartphone you can wear

Why it failed:

- Price tag
- Privacy issues
- Where's the use case?



Netflix

Value Proposition:

- TV on demand

Why it clicked:

- Pivot by company to bury their initial concept
- Timing of launch
- Internet availability
- Ease of access



Gmail

Value Proposition:

- A simple email experience

Why it clicked:

- Simplified email user experience
- Responded directly to frustrations around email storage capacities of competitors
- Tagline at launch: 'Never delete an email again'



Facebook

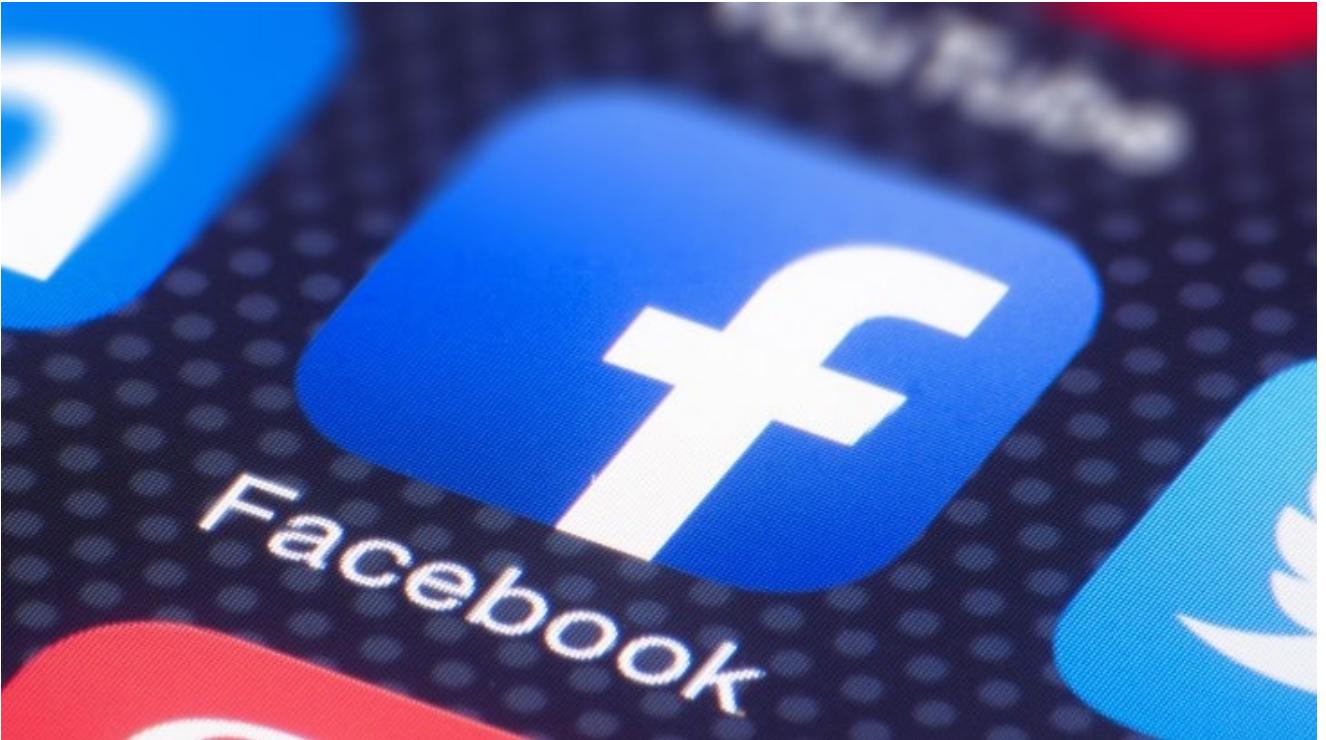
Value Proposition:

- An easy way to connect with friends

Why it clicked:

- User driven
- The Social Platform

Why might it fail?



1. Big Data
2. The Quantified Self
3. Collaborative Commerce
4. Context Awareness
5. Cloud Computing
6. Internet of Things

Transformative Internet Tech Trends



Transformative Internet Tech Trends

1. Big Data

- Companies are benefiting from the troves of data they have been warehousing.
- Big data enables companies to track customer buying habits and make adjustments quickly if necessary.
- This has been described as “knowing the now.”
- In other words, companies use big data not simply to understand what happened, but to know what is happening right now—in real time

Transformative Internet Tech Trends

2. The Quantified Self

- The quantified self is a function of numerous converging factors:
 - aging Baby Boomers who want to maintain their youth and vitality into their senior years;
 - the miniaturization of sensors and their ability to be embedded in the body and in exercise gear; and
 - the ubiquitous presence of smart phones and apps that can communicate with the embedded sensors.
- Nike + is an example of how the company is recruiting developers to add value to its portfolio of athletic products

Transformative Internet Tech Trends

3. Collaborative Commerce

- It was only a matter of time before entrepreneurs realized that people are becoming more comfortable sharing things via the Internet.
- What began as social networking and the sharing of personal information has now evolved to widespread sharing of nearly everything.
- For example, depop.com combines social networking with a marketplace that allows users to sell items or see what their friends are buying and liking. In 2021 the platform was acquired by Etsy but continues as a standalone company.

Transformative Internet Tech Trends

4. Context Awareness

- The ever decreasing cost of embedding sensors and microchips in objects, people, pets, and so on, has opened up a new world of what is called “context awareness.”
- People can now maintain e-connectivity with their possessions and loved ones via a network of embedded sensors and chips.
- Entrepreneurs are exploiting this explosion of e-connectivity by designing applications that keep track of children or pets, monitor the home, and much more

Transformative Internet Tech Trends

5. Cloud Computing

- So-called cloud computing is the longest-running of the trends cited here.
- The notion that the “network is the computer” was put forward by Sun Microsystems’s Scott McNealy as a founding motto of the company in 1985.
- Since then, cloud computing has become more important with increasing bandwidth, storage, and network speeds.
- Today, companies and consumers alike are comfortable with storing important information, pictures, and other digital content in the cloud.

Transformative Internet Tech Trends

6. Internet of Things

- This emerging category builds on some of the technologies listed above, but is not necessarily human-centric.
- That is, the embedded sensors that enable people to keep track of home appliances, children, pets, and other things also enable nonsentient “things” to talk to and keep track of one another

Tech Trends

beyond the realm

of the Internet

1. Bitcoin and the advent of new digital currencies
2. E-medical records and the advent of major changes in health care provision
3. Cyber security and the need to ensure the integrity of data and transactions
4. Nanotechnology breakthroughs in medicine and other areas
5. Health informatics and the ability to analyse massive amounts of health data
6. Aging research that prolongs/lengthens life spans
7. Robotics and the increasing role of robots in the workplace and the home
8. Brain science advances that will alter mental health care

Thank you