DIGITAL MINDSET AND DIGITAL CITIZENSHIP

Navigating the Digital World Efficiently & Responsibly

TOPIC 1

LDCW6113 | LDCW6123

Learning Objectives

By the end of this module, students should be able to:

1. Demonstrate digital competence by using technology safely, ethically, and effectively.
2. Adopt a digital mindset by being adaptable and open to continuous learning.
3. Analyze technology's impact on society, global issues, and the digital divide.
4. Apply principles of digital citizenship in personal and professional digital interactions.
5. Evaluate the influence of social networks on communication, society, and individual well-being.
6. Protect and manage digital presence and privacy in online environments.

CS +

Which field would you be most curious about combining with CS?

- *Literature*
- *Statistics*
- *Business*
- *Nursing*
- *Criminal Justice*
- *Anthropology*
- *Art*
- *Other*

1.1 DIGITAL COMPETENCE

Why are you in this class?

- Learning digital competence in class prepares students for the modern workforce, improves information literacy, and enhances communication skills.
- It teaches students how to use technology responsibly, stay safe online, and adapt to rapid digital changes—key skills for success in a tech-driven world.

Digital Competence

Learning digital competence in class prepares students for the:

- modern workforce
- improves information literacy
- enhances communication skills.

It teaches you:

- how to use technology responsibly
- stay safe online
- adapt to rapid digital changes

  e.g : key skills for success in a tech-driven world.

The importance of Computer Literacy

Computer literacy

- Understand capabilities and limitations of computers
- Know how to use safely and efficiently

Table 1.2 What Does It Mean to Be Computer Literate?

 You can **avoid falling prey to hackers and viruses** because you are aware of how they operate.	 You know how to **protect yourself from identity theft**.	 You can **separate the real privacy and security risks from things you don't have to worry about**.
 You know how to find information and **use the web effectively**.	 You can **avoid being overwhelmed by spam, adware, and spyware**.	 You can **diagnose and fix problems** with your hardware and software.

Examples of what it means to be a computer savvy user and consumer:

Computer literacy

1. **Avoiding hackers and viruses** – can threaten computer security
2. **Protecting your privacy** – if identity stolen, your credit rating can be quickly ruined. Do you know how to protect yourself from identity theft online?
3. **Understanding the real risks** – Being computer literate meansable to separate real privacy and security risk. Cookies, cashe, firewall configuration
4. **Using the web wisely** – know how to utilized internet and computer wisely
5. **Avoiding online annoyances** – avoid spam, junk mail,adware,spyware, worms,viruses etc
6. **Technical Skills** - Ability to maintain, upgrade, and troubleshoot a computer
7. **Keeping up to date** - Technology evolves rapidly. Stay up-to-date with the latest software updates and trends in computing to maintain your computer literacy.

1.2 Cultivating a Digital Mindset

Adaptability

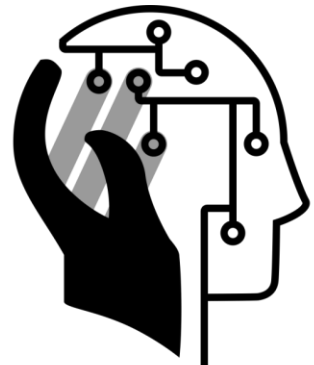
- Embracing change and new digital tools
- Flexibility in adopting technology
- Openness to new ideas and methods
- Quick response to challenges and changes

Resilience

- Navigating failures and setbacks in digital environments
- Developing perseverance and mental flexibility
- Learning from difficult digital experiences
- Recovering from online challenges

Lifelong learning

- Continuously updating digital skills
- Staying current with technological developments
- Reducing fear of new technology
- Fostering sustained career resilience



Digital **Mindset**

1.3 Technology in Global Society

Impact of Tools of Modern Technology

1. SOCIAL MEDIA TOOLS

Social networking tools enable groups to connect and exchange ideas

- Twitter, Facebook, and Instagram enable people to connect and exchange ideas.
- These same tools are also bringing together people facing similar problems to fight for social change.

2. CRISIS MAPPING TOOLS

Crisis-mapping tools collect and map information and then maps it, instantly making the information publicly available.

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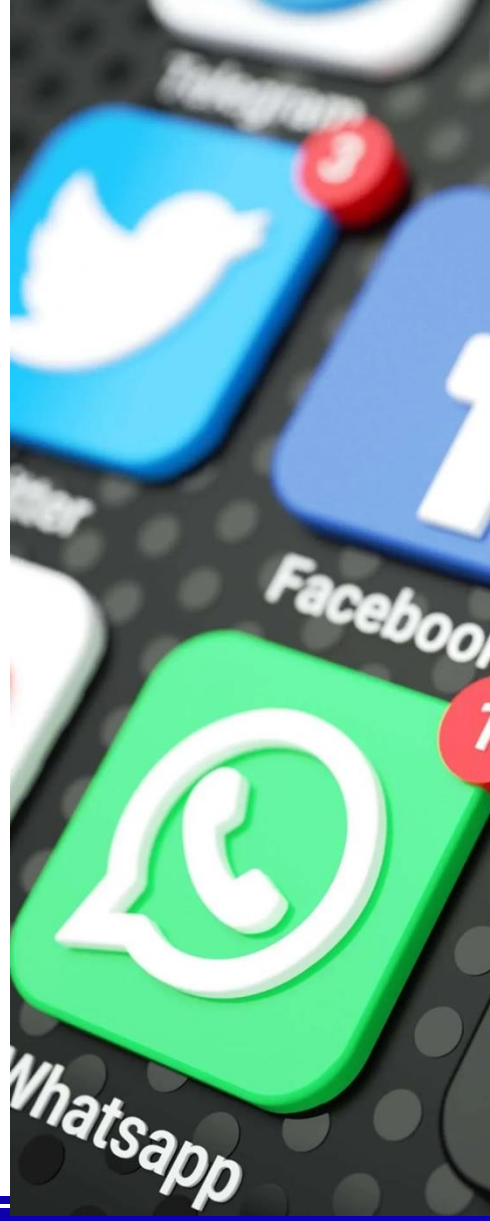
The Impacts!

Modern technology tools have fundamentally transformed how societies communicate, respond to crises, and access information. Here are key impacts of two critical categories of digital tools:

1. SOCIAL MEDIA TOOLS

POSITIVE IMPACTS	NEGATIVE IMPACTS
• Enhanced Global Communication and Connectivity • Powerful platform for social awareness and activism. • Valuable educational resources and creates economic opportunities. • Crisis communication and Emergency response during disasters and emergencies.	• **Mental health consequences** –heavy social media use and increased risks of depression, anxiety, loneliness, and self-harm, particularly among teenagers and young adults. • **Privacy and digital manipulation** • **Misinformation and Echo chambers** - Social media platforms have become breeding grounds for misinformation and conspiracy theories



The Impacts!

2. CRISIS MAPPING TOOLS

A crowdsourcing tool that lets any mobile phone user help map humanitarian crise.

Example: software Ushahidi. It's a crisis mapping tool that collects information from e-mails,text messages, blog post,tweetes and then mapped them and instantly share it to the public.

Real scenario: Dispute election in Kenya, violence broke al over the country. Nairobi lawyer – Ory Okolloh tried to get word of the violence out to the world through her blog, but she could'nt keep upwith the volume of reports.

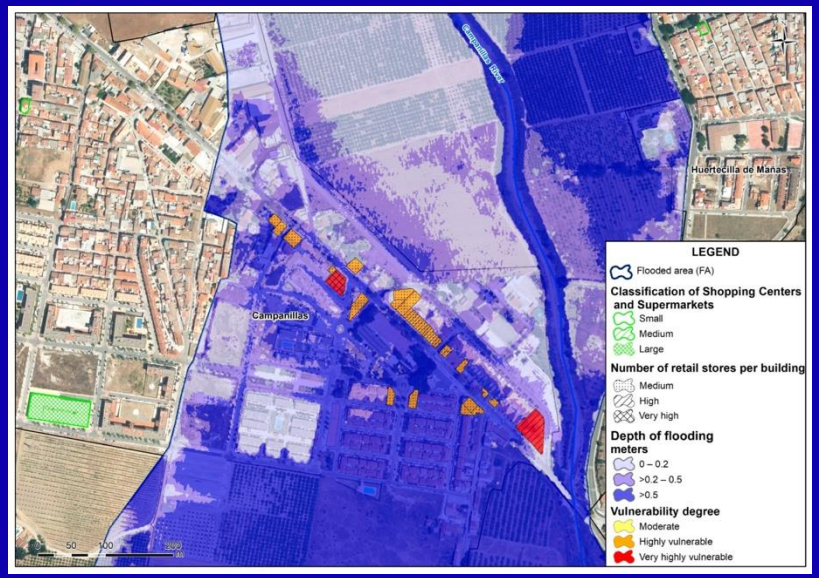
So, two programmers saw her request zor help and in created Ushahidi few day after. Developer made it a free platform so everyone can use it.

Giving citizens the power to put news on the map

The Impacts!

2. CRISIS MAPPING TOOLS

POSITIVE IMPACTS	NEGATIVE IMPACTS
• Enhanced Situational Awareness and Emergency Response. • Crowdsourced Intelligence and Community Empowerment • Improved Resource Allocation and Coordination • Cost-Effective Response Solutions • Early Warning and Preparedness.	• Security and Privacy Risks • Data Quality and Verification Challenges • Digital Divide and Accessibility Issues • Coordination and Integration Difficulties



Mapping Tools for Flood Risk Rescue and Assistance Management

1.4 Global Issue

Different global social issues that technology affects.

1. Health care

- ✓ The global pandemic brought by the COVID-19 virus infected millions, with catastrophic public health and economic consequences.
- ✓ Scientific visualization tools help scientists develop tests for antibodies for specific viruses.
- ✓ Computationally intense modeling software helps researchers increase the pace of vaccine discovery.

2. The Environment

- ✓ Data could alert scientists to new trends
- ✓ Monitoring and Predicting Climate Patterns
  - Utilizing historical data for climate pattern analysis
  - Developing predictive models for climate change effects
  - Enhancing disaster preparedness through data-driven insights
- ✓ Biodiversity Preservation and Analysis
  - Monitoring species populations using sensor data
- ✓ Remote Sensing Applications
  - Monitoring deforestation and land-use changes from satellite data
  - Tracking ocean temperature and its effect on marine life
  - AI-assisted Wildlife Conservation

1.4 Global Issue

Different global social issues that technology affects.

3. Digital divide

- There is a serious gap in the levels of Internet access and the availability of technical tools in different regions of the world.
- The term for this difference in access to technology is the digital divide.
- One danger of a digital divide is that it prevents us from using all the minds on the planet to solve global problems. But this challenge created by technology is also being answered by it.

- The Digital Divide
  - Gap exists between levels of Internet access and availability of technical tools
  - Prevents use of all minds to solve planet's problems

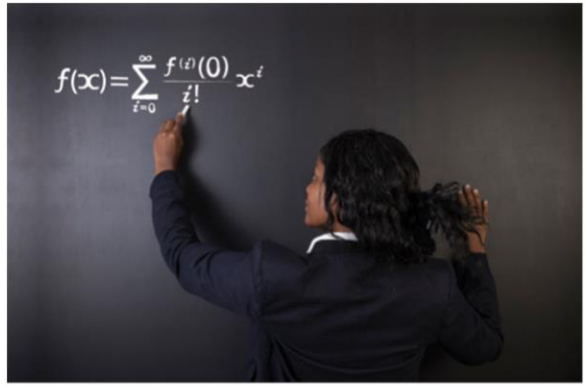


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Figure 1.3 The Next Einstein Initiative (NEI) is rallying the support of the world to identify and encourage mathematical genius.

1.4 Global Issue

Different global social issues that technology affects.

Table 1.1 Technology in Action: Taking on Global Problems

Person/ Organization	Global Problem	Technology Used	Action	Find Out More . . .
Start Network	Corruption	Blockchain, a digitized public ledger for recording a series of transactions	Blockchain technology can help track humanitarian aid funds as they flow from donors to recipients.	Start Network: *startnetwork.org*
SolaRoad/ Netherlands	The need for a renewable, nonpolluting energy resource	Solar cells	Solar cells are integrated into the asphalt roadway. They collect solar energy and distribute electricity all day.	Netherlands SolaRoad: *solaroad.nl*
Tech Against Trafficking	Human sex trafficking and slavery	Geographic mapping and tracking, AI data analysis	Tackles modern-day slavery and trafficking by identifying and tracking victims.	Tech Against Trafficking: *techagainsttrafficking.org*
Global Water Program	Dwindling access to pure water globally	Desalination, smart water meters, fog harvesting	Technological solutions for conserving, purifying, and desalinating water.	Global Water: *globalwater.org*

Table 1.1 shows additional examples of people putting technology into action to impact the world. How will you join them?

1.5 Digital Society = Digital Citizenship

Digital Citizenship: Rights, responsibilities, ethical participation

What is a society?

- Society is an association of people organised under a system of rules designed to advance the good of its members over time.
- Requires cooperation among individuals
- However, people usually compete with each other.
- Rules determine what people should and shouldn't do in various situations
- We call these rules **morality.**

What about citizen within a society?

Citizen

- An inhabitant of a city or (often) of a town; esp. one possessing civic rights and privileges, a burgess or freeman of a city. Source: *Oxford English Dictionary*

So, the question remain for us now, what is Digital Citizenship?

What defines a digital citizen?

- A citizen that participates within a digitally populated world using technology
- Characteristics
  - No formal boundaries
  - No single legal entity with responsibility
  - No single governance model
  - Cross nationality problems
  - Technology as the vehicle and the medium

The world wide web = the Internet? most people refer to web as the Internet. INCORRECT! The world wide web is the network of connected computers.

The world wide web allow people to access the Internet. Your web browser use the internet to access the web.

Nine themes of Digital Citizenship

- ✓ In order to understand the society today, we must understand the meaning of digital citizenship.
- ✓ A citizen that participates within a digitally populated world using technology, could be living anywhere in the world.
- ✓ Internet and the world wide web are two important things connect people in modern society.

1. Digital etiquette
2. Digital communication
3. Digital literacy
4. Digital access
5. Digital commerce
6. Digital law
7. Digital rights and responsibilities
8. Digital health and wellness
9. Digital security (self-protection)

Nine themes of Digital Citizenship – cont'

1. Digital Etiquette

- Also known as Netiquette
- Electronic standards of conduct or procedure.

2. Digital Communication

- Electronic exchange of information – this is very important but technology is not and should replace our ability to communicate.

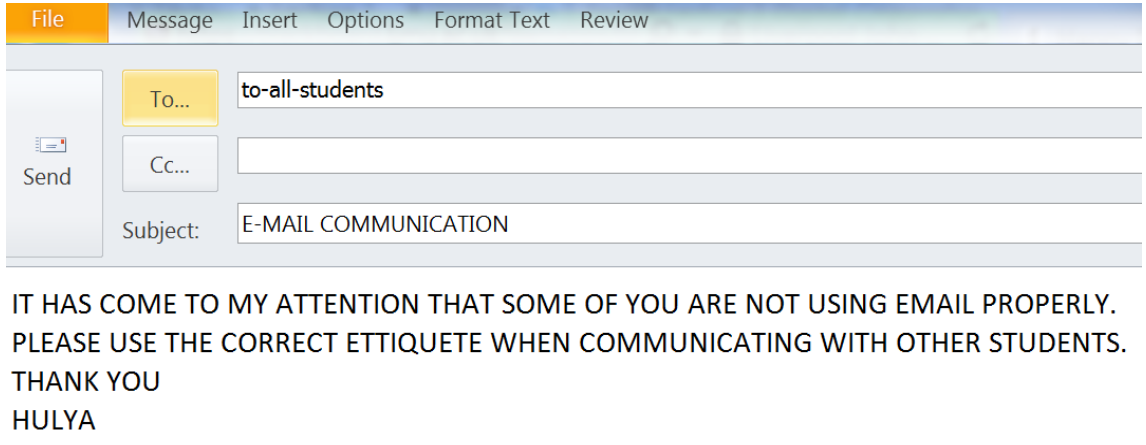
3. Digital Literacy

- Process of teaching and learning about technology
- And the use of technology.
- Technology should be used for personal and
- Profession growth.

4. Digital access

- Full electronic participation in society

Digital Etiquette & e-mail



The use of capital letters in e-mail messages implies that the author is raising their voice (SHOUTING).

Q. Does this message give the impression of a polite reminder or an antagonistic approach? In today's society, the digital etiquette is important and passing the correct procedures and correct use of technology to the next generation is our duty.

Digital Etiquette & the Business

- Managing a virtual business is challenging.
- There are several “rules” and the business organisations adhere to these rules:
  - ✓ Offer a “virtual handshake (gestures-automated chats emojis etc)
  - ✓ Use images
  - ✓ Establish time zones
  - ✓ Move to voice chat ASAP
  - ✓ Proofread everything
  - ✓ Write concisely
  - ✓ Stick to business hours
  - ✓ Clean up your image
  - ✓ Don’t overshare

This is also due to the change in various laws imposing restrictions on how the business can communicate with their customers in an online environment.

Digital Access

In the context of digital citizenship, digital access means:

- Ensuring that everyone has **equitable opportunities** to use digital tools and online resources, regardless of their socioeconomic status, location, or personal circumstances.
- **Addressing barriers** such as affordability, reliable internet connectivity, and accessibility for people with disabilities, so no one is excluded from educational, economic, or social participation online.
- Recognizing that digital access is not distributed equally—some individuals or communities have limited or no internet or device access, which widens the "**digital divide.**"
- **Empowering all community members** especially students, to use technology safely, ethically, and productively by supporting both access and digital literacy education.

Digital Access

- E-government
- Communications
  - Remote rural areas / offshore areas
- Access for all age groups
- Digital exclusion
- Assistive technologies

Malaysian-Invented Assistive Technologies

1. **Wearable Vibration Device** – UTM jacket with sensors for blind users; detects obstacles and tracks location.
2. **BAWA Cane** – IoT smart cane with obstacle detection, GPS, and voice guidance.
3. **e-pek@k** – ICT access program for the hearing-impaired, enhancing education and communication.

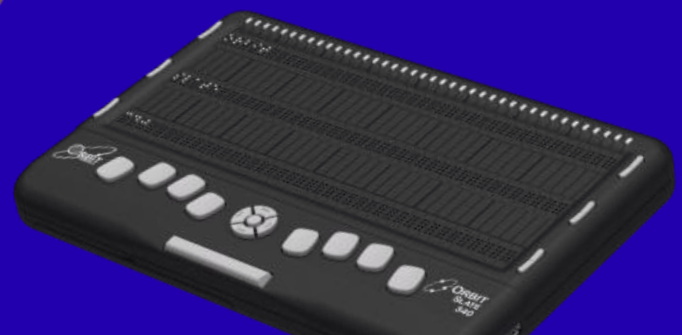
Assistive Technologies

Input systems

- Braille keyboards
- Head-pointing systems
- Camera tracking systems
- One-handed keyboards
- Trackball vs. Mouse
- Speech recognition

Output systems

- Screen reader systems
- Speech synthesis
- Braille displays/printers



Digital Access

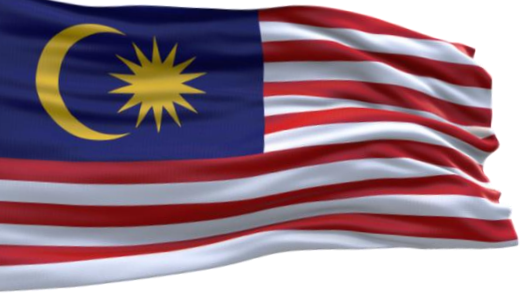
- Digital Exclusion

There are **four** main factors that create digital exclusion in modern societies.

- **Access:** both physical and financial
- **Motivation:** including understanding or appreciation of the benefits
- **Skills:** including whether they have any available means of learning ICT skills
- **Confidence:** including fears of fraud and online security

Those Affected (At Risk of Exclusion)

- **Rural and remote communities** – Poor internet infrastructure
- **Low-income households** – Cannot afford devices, stable internet, or digital training.
- **Elderly population** – Lower digital literacy, limited confidence with tech.
- **People with disabilities** – Need assistive technologies; face accessibility issues online.
- **Students in underserved areas** – Disadvantaged during online learning (especially during COVID-19).
- **Indigenous and minority ethnic groups** – Often in geographically isolated locations, with language and cultural barriers to digital tools.



Digital Exclusion Cases in Malaysia

Here are several real-world examples of **digital exclusion** (or the digital divide) in Malaysia:

1. **Pulau Tuba, Langkawi** – Only two spots near a primary school had good internet; most areas had poor or no coverage, limiting residents' ability to use it for income or business.

2. **Sabah Infrastructure Gaps** – In 2006, one of the lowest internet penetration rates (6.5 lines/100 people). By 2014, only 934 hotspots; broadband expansion began 2016–2019.

3. **Rural Youth in Sabah (COVID-19)** – Limited devices and poor connectivity disrupted online learning; some students worked part-time to buy equipment.

4. **Indigenous Villages, Sarawak** – 4 of 11 villages had no internet; others had sporadic access and poorly maintained infrastructure.

5. **Urban Ethnic Disparities** – In Penang and Kuala Lumpur, Chinese youths spent twice as much time online as Malay and Indian peers due to better PC access and connection quality.

Digital Access

- Digital Inclusion

Digital inclusion is the effort to ensure that everyon regardless of age, income, location, ability, or education has **equal opportunities to access, use, and benefit from digital technologies**.

It usually covers **three main** areas:

1. **Access** – Affordable, reliable internet and suitable devices (e.g., smartphones, computers).
2. **Skills** – Digital literacy training so people know how to use technology safely and effectively.
3. **Accessibility** – Designing technology and content so it works for everyone, including people with disabilities.

Malaysian initiatives that align with this digital inclusion

1.Access – *JENDELA* expands 4G/5G coverage; *Pusat Internet Komuniti* offers affordable internet in rural areas.

2.Skills – *MyDigital* and MDEC's *eRezeki/eUsahawan* provide digital literacy and online business training.

3.Accessibility – *OKU Digital Empowerment* supports people with disabilities; local tech like the *BAWA Cane* aids the visually impaired.

Digital Access

- Digital Divide

- Digital divide is the gap between those with adequate internet, devices, and skills, and those without.

- Digital ‘haves’ and ‘have-nots’ – the gap between those who have access to technology and those who don’t
  - Can exist within a country, as well as between countries
  - Differences in technology use by income, race, geographical area, education, broadband use, etc.
- Infrastructure and resources issues
  - Access to telecommunications
  - Access to hardware

Example:

In some parts of Terengganu, fishermen struggle to adopt e-wallets for government cash aid because they lack smartphones or stable internet, limiting their participation in digital transactions.

Nine themes of Digital Citizenship – cont'

5. Digital commerce

- Electronic buying & selling of goods and services (Lazada 8.8 sale, Black Friday, etc)
- All this event became important in the last few years in our society.

6. Digital Law

- Electronic responsibility for actions & deeds.
- The digital world can be problematic to enforce correct procedures.
- The digital age brings it own problems, i.e. copyright infringement & trademark issues.

7. Digital Rights & Responsibilities

- Those freedoms extended to everyone in a digital world.

8. Digital Health & Wellness

- Physical and psychological well-being in a digital technology world.

9. Digital Security (self-protection)

- Electronic precautions to guarantee safety.

Digital Health & Wellness

Physical health

- Computer vision syndrome (CVS) – collection of vision problems due to computer use - *Blurred vision, eyestrain, headacheas, etc.*
- Repetitive Strain Injury (RSI) and Carpal Tunnel Syndrome (CTS)
- Sound ergonomic practices
- Fatigue

Psychological health

- Computer or Internet Addiction Disorder (CAD / IAD)
- Stress
  - Caused by financial worries, being overworked, being unable to relax, information overload
  - Is connected to heart attacks, stroke, diabetes, weakened immune system

Internet Overuse/Addicted

- Problematic Internet use is also called **compulsive Internet use (CIU), Internet overuse, problematic computer use**, or **pathological computer use, problematic Internet use**, or **Internet addiction disorder**.
- In the most recent version of the DSM-5, Internet Gaming Disorder is the latest term to describe this problem.

Digital Security

How can we protect ourselves in a digital environment?

- Anti-virus software
- Backups of important data
- Protection from power cuts (UPS and surge protection)
- Physical security of passwords
  - Social engineering attacks and the role of VPN (Virtual Private Network) / Tor Networks (The Onion Router)

1.6 Social Networking

Common social networking sites

Common social networking sites include:

- **Facebook** – for connecting with friends, sharing posts, and joining groups.
- **Instagram** – for sharing photos, videos, and stories.
- **X (formerly Twitter)** – for short text updates, news, and trends.
- **LinkedIn** – for professional networking and career opportunities.
- **TikTok** – for short-form videos and creative content.

1.6 Social Networking

The Most Widely Used Social Media Platform Globally

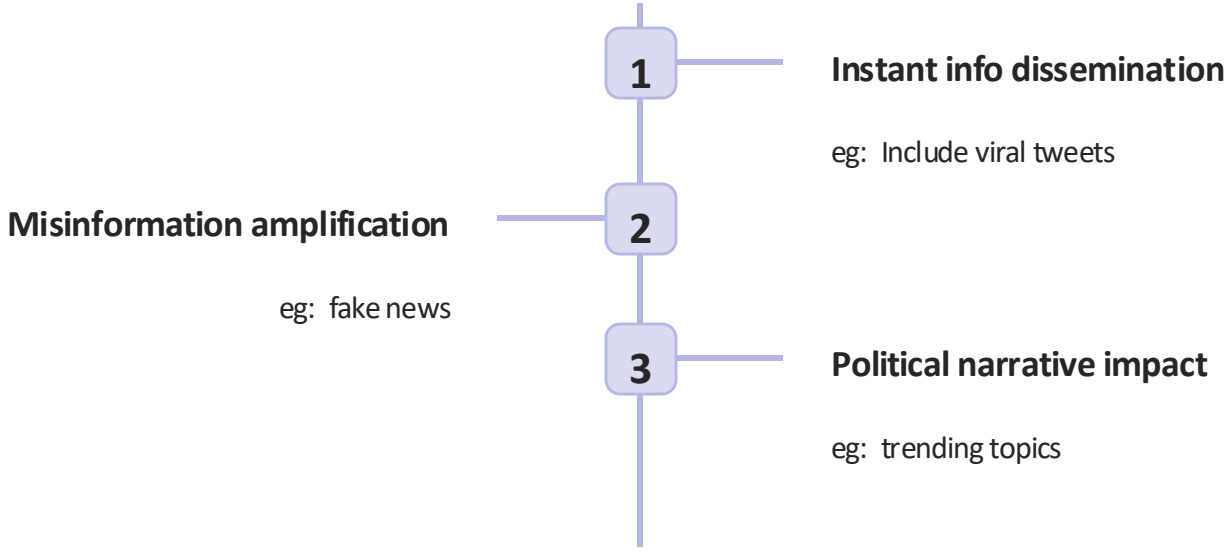
- **Facebook** remains the most used social media platform worldwide, with **over 3 billion monthly active users**, leading the pack by a significant margin.
- **YouTube** ranks second with approximately **2.5 billion monthly active users**
- **WhatsApp** and **Instagram** both have about **2 billion** users each
-
- **TikTok** holds fifth place with around **1.58 billion** monthly active users
- **Telegram** recently reached a milestone of **1 billion** users

1.6 Social Networking

The Most Widely Used Social Media Platform Globally – cont'

- **LinkedIn-** a Business Social media platform and it has over 700 million registered users
- **Pinterest-**developed as social media site but also as part of search engine-digital bulletin boards where the users are allowed to share their project ideas, find products, DIY ideas, recipes share product images (launched in 2010)
- **Flickr-**royalty free images can be found in this site and **Reddit**-business organisations has seen attraction and stared making use of this company for their sales and promotions.

How Social Media Revolutionized Communication



The Commercialization of Social Media

Targeted advertising

eg: Instagram shopping

E-commerce hub

eg: Facebook marketplace

User privacy concerns

eg: ad targeting

Building and Nurturing Communities on Social Media

Niche communities

eg: craft communities

Specific interest groups

eg: coffee lovers groups

Global communities

eg: international student groups

The Tension Between Profit and User Well-Being

1. **User engagement vs. mental health**

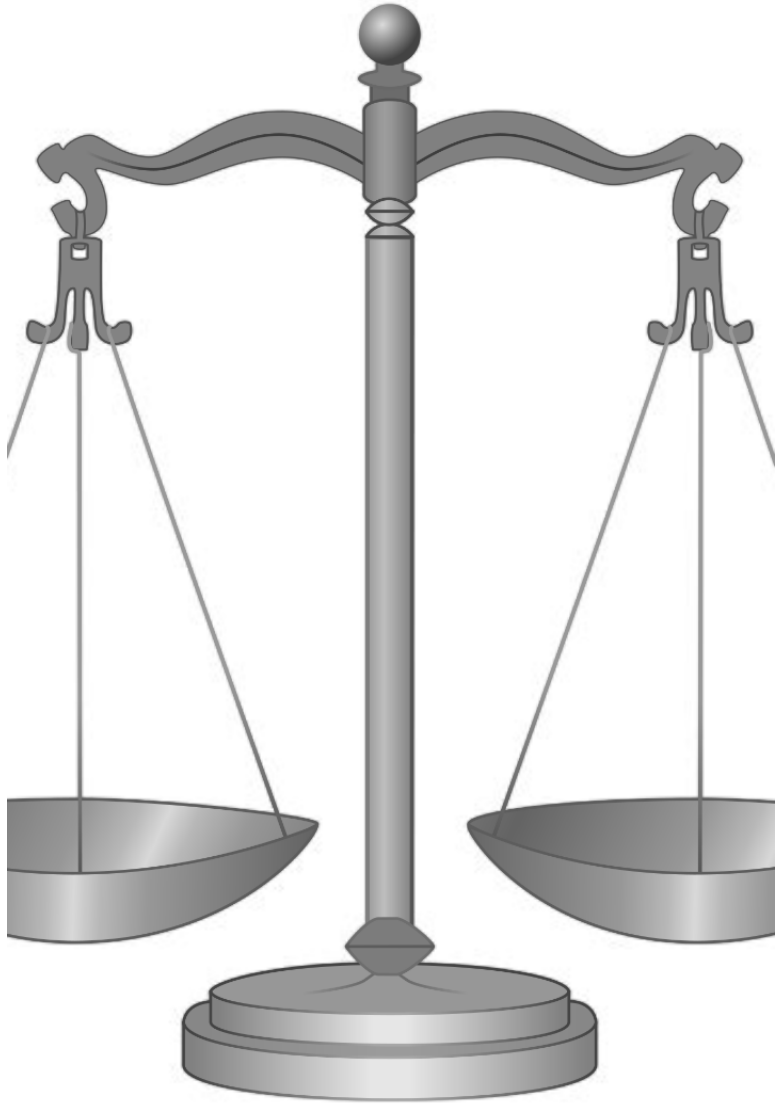
   eg: Instagram and binge-watching

2. **User privacy vs. commercial focus**

   eg: data collection and monetization

3. **User well-being vs. profit motives**

   eg: YouTube's autoplay feature



How Algorithms Shape Our Online Experience

1. **Algorithm-based content curation**

   eg: social media feeds

2. **Echo chambers**

   eg: Reinforcing existing beliefs

3. **Transparency required**

   eg: revealing recommendation criteria

The Double-Edged Sword of Data Collection

Pros of data collection

- Targeted advertising
- Personalization
- Improved recommendations

Cons of data collection

- User privacy concerns
- Potential misuse
- Exploitation

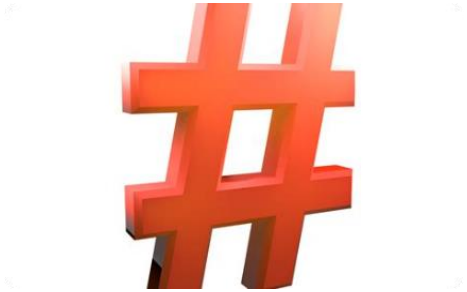
The Impact of Social Media on Democratic Processes

Social movements

eg: The Arab Spring

Misinformation campaigns

eg: US Presidential Elections



Amplifying voices

eg: #MeToo movement

Fun fact:

Young Egyptian who named his Daughter "Facebook"

In the wake of the Egyptian Revolution of 2011, which was a part of the Arab Spring, a young Egyptian man named Jamal Ibrahim named his newborn daughter "Facebook" to honor the role the social media platform played in organizing the protests in Tahrir Square and other parts of the country. The name was meant to express gratitude for the platform's role in facilitating communication and mobilization during the revolution.

The Psychological Impacts of Social Media Use

Negative impacts

- Depression and anxiety
- Loneliness
- Addiction

Positive impacts

- Self-expression
- Support system
- Access to information

Where Are We Headed?

Technological advancements

Examples include VR social spaces and virtual influencers

Eg:

- AI
- Automation
- Data provacy

Moral and ethical debates

Examples include data privacy laws and content moderation policies

Eg:

- AI Ethics
- Digital Divide
- Social media responsibility
- Environmental Impact

How Do Social Media Platforms Profit?

1. **Advertising-based model**

   Targeted ads and influencer partnerships

2. **Free at a cost**

   Include user data collection and monetization

3. **Alternative business models**

   Subscription-based platforms

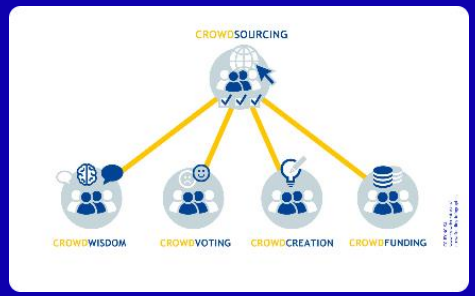
Power Players of Social Media

Influencers as stakeholders

influencer-driven campaigns and brand partnerships

Social movements

organizing protests and politically-driven content



Crowdfunding and donations

fundraising initiatives and charity causes

The Psychological Impact of Constant Connection

Excessive use

eg: include screen-time and digital detox trends

Social validation

eg: competition for likes and comments

Case Study:

How Cambridge Analytica Exploited the Facebook Data of Millions

How Cambridge Analytica Exploited the Facebook Data of Millions

- **Data Collection:** Cambridge Analytica used a Facebook app ("thisisyourdigitallife") that offered personality quizzes. When people used it, it collected both their personal data and data from their Facebook friends without most users' clear knowledge.
- **Massive Data Harvesting:** While only around 270,000 people took the quiz, the app accessed data from about 87 million users in total, including information such as names, interests, and demographics.
- **Psychographic Profiling:** The company analyzed this data to build psychological profiles of users, helping them target individuals with highly specific, emotionally driven political ads.
- **Political Campaigns:** Cambridge Analytica worked for the 2016 Trump U.S. presidential campaign and on the Brexit "Vote Leave" campaign, helping both by targeting ads to specific voter groups based on these profiles.
- **Ethical Concerns and Consequences:** The methods raised major privacy concerns because most users had not consented to such use of their data. The scandal led to public outrage, official investigations, and changes in Facebook's privacy practices, including legal penalties for Facebook and Cambridge Analytica

Leveraging Platforms for Brand Success

1. **Powerful tool for branding and marketing**

   viral marketing campaigns and influencer partnerships

2. **Authenticity and genuine engagement**

   customer service on platforms like Twitter

3. **Monitoring and adapting to changing trends**

   TikTok for branding

The Power of Targeted Ads

Effective for sales

Amazon ads during product searches

Location-based targeting

local restaurant ads on Facebook

Innovative ad campaigns

creative use of social media platforms

Privacy Issues

- Everything we post online is forever present on the web and is known as our digital footprint
  - ✓ Emails, updates, messages – even those old embarrassing photos and videos are stored somewhere in the World Wide Web and can be found if you know where to look

- There's no such thing as a delete button online and social networks are often the first-place potential employers look to form their opinion of you

- Privacy issues in Social Media are:
  - ✓ Identity Theft (Biometric data included)
  - ✓ Employment
  - ✓ Stalking
  - ✓ Crime

- The phenomenal amount of data we produce each day on social networking sites has resulted in increased security and privacy concerns.

- The new era with tight control over the data privacy is to some extend forcing social media companies to make sure they stay within the law.

Privacy Issues

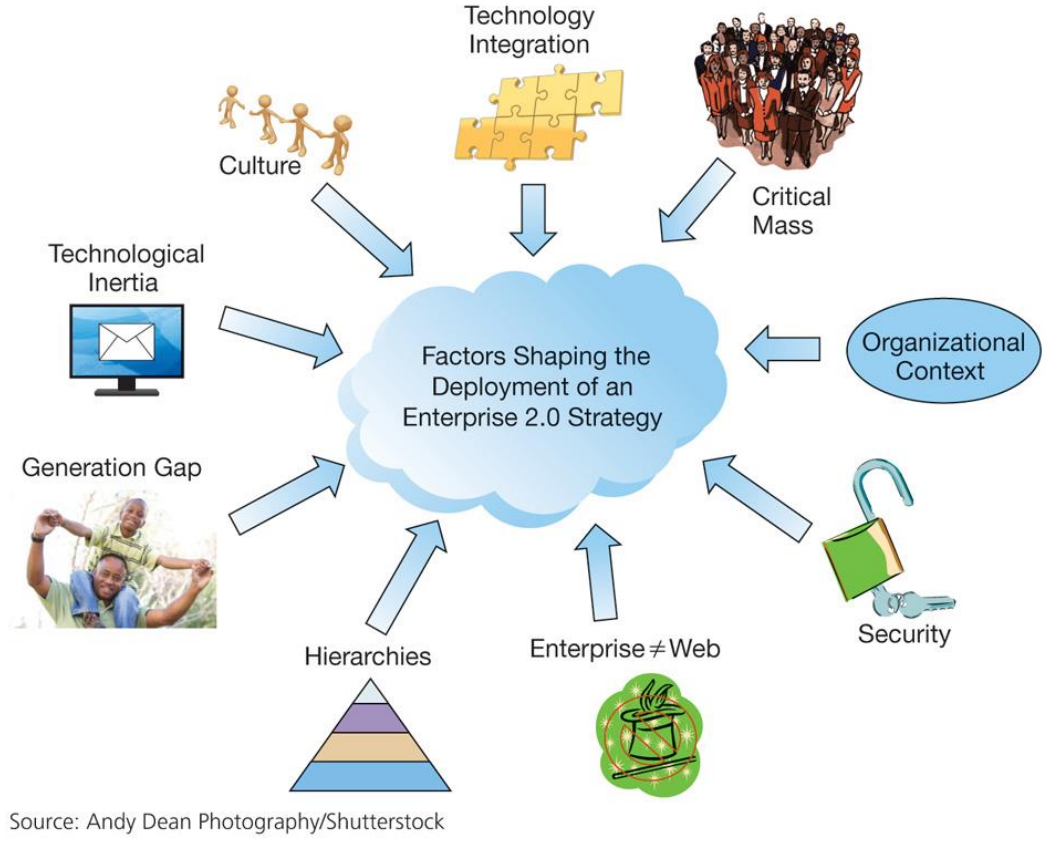
Malaysia's New Social Media Regulation (Effective January 1, 2025)

1. **Mandatory Licensing**
   From August 1, 2024, platforms with 8M+ Malaysian users (e.g., Facebook, WhatsApp, Instagram, TikTok, Telegram, WeChat, X, YouTube) must obtain an ASP(C) licence under the Communications and Multimedia Act 1998.
2. **Grace Period & Requirements**
   Valid until Dec 31, 2024. Licence fee: RM2,500/year. Platforms must be locally incorporated unless exempted, with required documents submitted.
3. **Compliance Obligations**
   Licensees must ensure effective content moderation, child protection, scam prevention, AI/deepfake safeguards, data security, and clear complaint channels.
4. **Penalties**
   From Jan 1, 2025: fines up to RM500,000, jail up to 5 years, plus RM1,000/day for ongoing violations; warnings or licence revocation possible.
5. **Early Adopters**
   WeChat and TikTok licensed; Telegram application in progress; Meta (Facebook, Instagram, WhatsApp) applying; X and YouTube yet to apply, citing classification concerns.
6. **Content Enforcement**
   June 2025: court injunction against Telegram over harmful content, showing active enforcement of the new rules.

Managing Social Media Applications for Business

1. **Organizational Issues**

Various factors must be taken into account when using social media applications within an organization



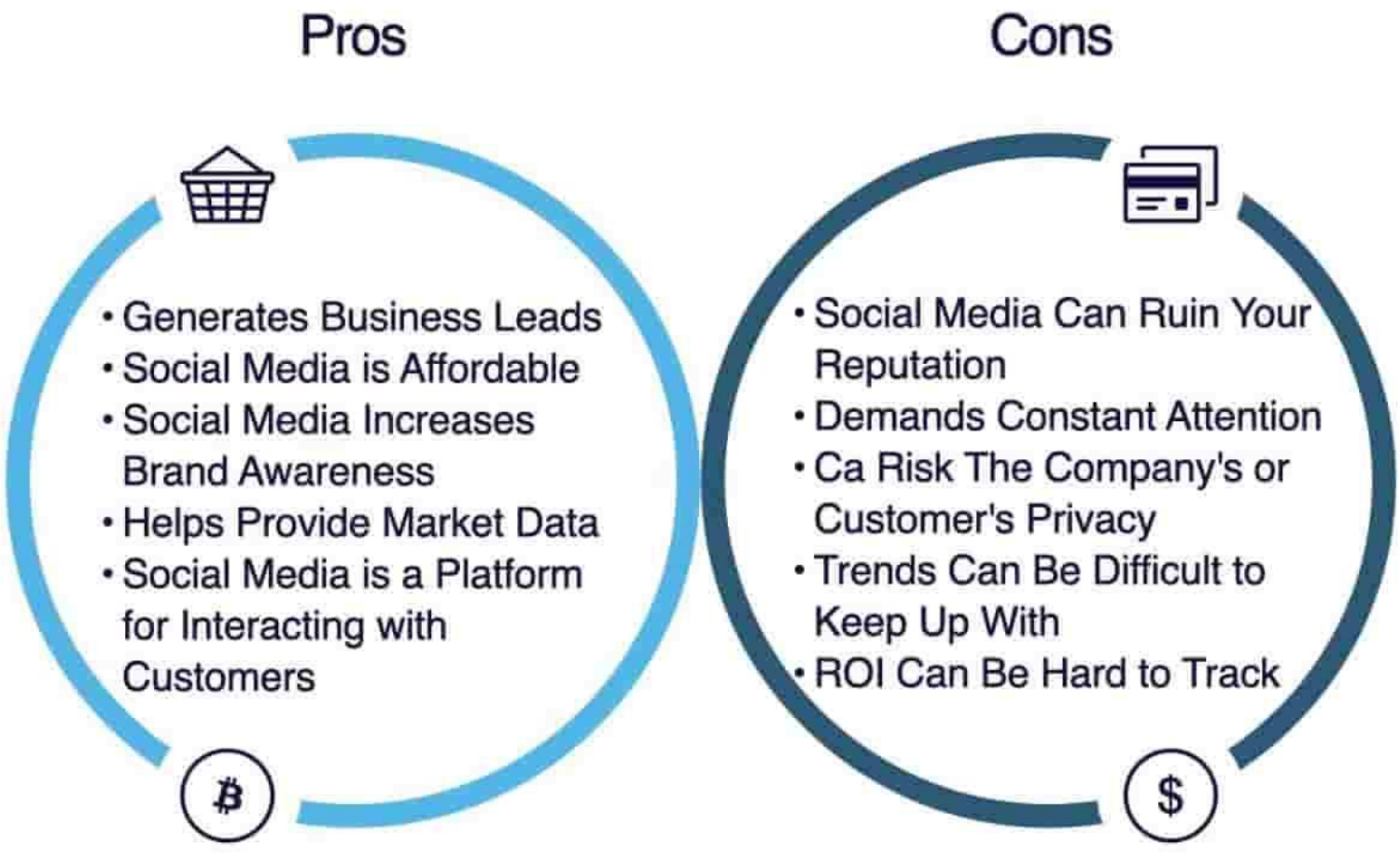
Source: Andy Dean Photography/Shutterstock

Managing Social Media Applications for Business

2. Downsides and Dangers of Using Social Media Applications

- Social media risks and challenges
  - Online Product Reviews – Negative reviews
  - Microblogging – Viral complaints
  - Social Networks
  - Bad Vibes Going Viral
- Crisis management essentials:
  - Identify a crisis team
  - Identify your worst social media nightmare
  - Monitor your social media environment
  - Act fast. The first 24 hours count

SOCIAL MEDIA



Managing in the digital world for business. Eg: Facebook

- Social media and collaboration tools are vital for organizations.
- Many companies now have Facebook pages, so proper risk management is important.
  - When users “like” a company, they can receive updates from the company
  - Consumers can leave comments for companies
  - Companies can interact with customers and track customer loyalty
  - Future demand is predicated based on customers’ “likes”

Social Media Web Scrapping

- Web scraping is a technique that has become an integral part of many businesses. (It is used for recruitment, sentiment analysis, assessing credit risk, identifying trends, marketing and sales etc)
- Web scraping and extraction of relevant data gives businesses an insight into market trends, competition, potential customers, business performance, etc.
- The importance of web scraping for social media lies in its ability to gather large amounts of public data quickly and efficiently, helping businesses, researchers, and marketers gain insights and make informed decisions.

Benefits!

- **Trend Analysis** – Track trending hashtags, topics, and viral content.
- **Competitor Monitoring** – Observe posting schedules, engagement, and strategies.
- **Audience Insights** – Gather demographic and behavioral data for target audiences.
- **Brand Monitoring** – Detect mentions, reviews, and brand discussions in real time.
- **Content Curation** – Collect popular posts, images, and videos for inspiration.
- **Influencer Discovery** – Find and assess influencers by engagement metrics.

Is Scrapping legal?

- It’s **not fully legal** in most cases — scraping social media without permission often violates the platform’s Terms of Service and may break privacy laws, even if the data is public.
- It’s only considered legal if you:
- Have permission (e.g., via official API or agreement)
- Collect non-personal, public data in compliance with local laws

Social media web scraping can be **legal or illegal** depending on:

- **Platform Terms of Service (TOS)** – Most platforms (Facebook, Instagram, X/Twitter, etc.) prohibit automated data scraping without permission. Violating TOS can result in account bans or legal action.
- **Data Privacy Laws** – Laws like Malaysia's **PDPA 2010**, the **EU's GDPR**, and others restrict collecting personal data without consent.
- **Public vs. Private Data** – Scraping publicly available, non-personal data is generally safer, but still may breach TOS. Scraping private or personal data without consent is often illegal.
- **Purpose of Use** – Academic research with ethical clearance is treated more leniently than commercial exploitation.

Social Media - Sentiment Analysis

- Social media sentiment analysis is the process of using **text analytics and natural language processing (NLP)** to determine the emotional tone behind posts, comments, or messages on platforms like Facebook, Instagram, or X/Twitter.
- It aims to figure out whether people's opinions are **positive, negative, or neutral**, and can also detect emotions such as joy, anger, or sadness
  - **Data Source** – Collects social media posts, comments, hashtags, reviews.
  - **Processing** – Cleans and analyzes text for keywords, tone, and context.
  - **Output** – Generates insights on public opinion trends, brand reputation, or campaign impact.
  - **Uses** – Marketing, customer service, political monitoring, crisis management, and product feedback.

Business organisations & Sentiment Analysis

Why Sentiment Analysis is so important for businesses?

Companies want to know the customer view on the products immediately "time is money" in their view and by automatically sorting the sentiment behind reviews, social media conversations, they are able to make strategic decision about their business marketing strategy.

Sentiment analysis models can use:

- Polarity (*positive, negative, neutral*)
- on feelings and emotions (*angry, happy, sad*, etc),
- urgency (*urgent, not urgent*)
- even intentions (*interested v. not interested*).

Fine-grained Sentiment Analysis could include:

- Very positive
- Positive
- Neutral
- Negative
- Very negative

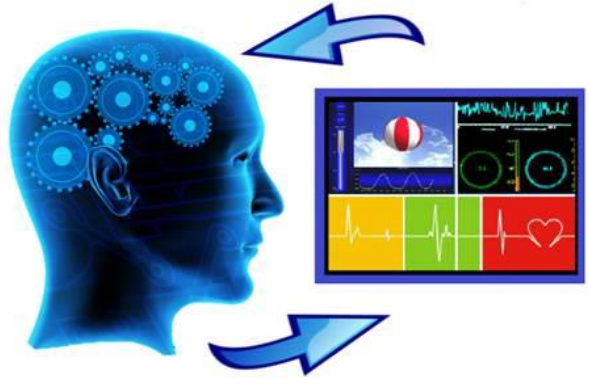
Lifelogging

- Lifelogging is the automatic recording of one's life using sensors, mobile, and wearable devices.
- Advances in technology and the growth of social media have connected lifelogging with online sharing.
- Modern lifelogging cameras act as digital memory extensions, capturing and storing moments in the cloud, often worn on the body so users can stay present without missing important moments

Lifelogging & enhancing self-improvement

- Lifelogging technology can be used to:
  - Promote the necessary degree of *self-reflection* that is required in order to develop effective coping strategies
  - This is achieved by delivering *feedback* in the form of *objective data* in order to enhance self-improvement or support cognitive function

The 1980's saw the start of the term lifelogging. Originally, the technology was very bulky to be used comfortably.



The year 2013 was a milestone for Lifelogging concept-when Google Glass and Memoto's wearable, automatic camera set started appearing in the IT market.

Crowdsourcing

- Crowdsourcing involves obtaining work, information, or opinions from a large group of people who submit their data via the Internet, social media, and smartphone apps.
- People involved in crowdsourcing sometimes work as paid freelancers, while others perform small tasks voluntarily.

For example, traffic apps like Waze encourage drivers to self-report accidents and other roadway incidents to provide real-time, updated information to app users.

Crowdsourcing business examples

Waze

- Crowd sources information by measuring drivers speed to determine traffic jams and by asking users to report road closures

Lego

- Allows users to design new products, and at the same time, test the demand

Pebble

- The most funded project ever on Kickstarter
- In 2015, $20.3 million was raised in pre-orders for its new Pebble Time watch.

Airbnb

- Entire business model is based on crowdsourcing
- Second-most-valuable U.S. start-up, after Uber

Crowdsourcing for disaster relief

- Ushahidi is an open-source software and non-profit tech company operating in nine countries.
- It is a well-known example of crowdsourcing for disaster relief, collecting data and survey responses from multiple sources.
- Originally created in 2007 to map reports of violence in Kenya after the 2008 post-election crisis, the platform has since been used in places like Mexico, Afghanistan, and Haiti.
- It gathers information from phones, websites, email, and social media (e.g., Twitter and Meta) to create a real-time crisis map for public use and relief organizations.

Ushahidi

Advantages Crowdsourcing for disaster relief

- **Rapid data collection** – Information can be gathered quickly from multiple sources, enabling faster decision-making.
- **Wide coverage** – Contributions come from people in different locations, increasing the accuracy and completeness of data.
- **Cost-effective** – Reduces the need for expensive data collection teams and equipment.
- **Real-time updates** – Data can be continuously updated during the disaster, keeping responders informed.
- **Community engagement** – Encourages public participation, making affected communities part of the solution.
- **Improved data privacy compliance** – Globally, most organizations have updated their data privacy policies following privacy law changes in the EU and UK GDPR, as well as Malaysia's Personal Data Protection Act (PDPA) 2010, which regulates the collection, use, and storage of personal data for commercial purposes

The End.