BUSINESS INFORMATION SYSTEMS (INFS1001)

SEMINAR - *WEEK 4*

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WEEK 4 AGENDA

Review

e-Commerce

Decision Making

Enterprise Resource Planning (ERP)

Systems Development Lifecycle (SDLC)

Week 4 wrap-up

WEEK 3 - REVIEW

- What are some of the myths of Enterprise Architecture?

- Where's the business value in Enterprise Architecture?

THE BUSINESS INFORMATION SYSTEMS ECOSYSTEM COURSE STRUCTURE

In this course we examine how business information systems impact the inner workings of a business and the connections to a broader ecosystem.
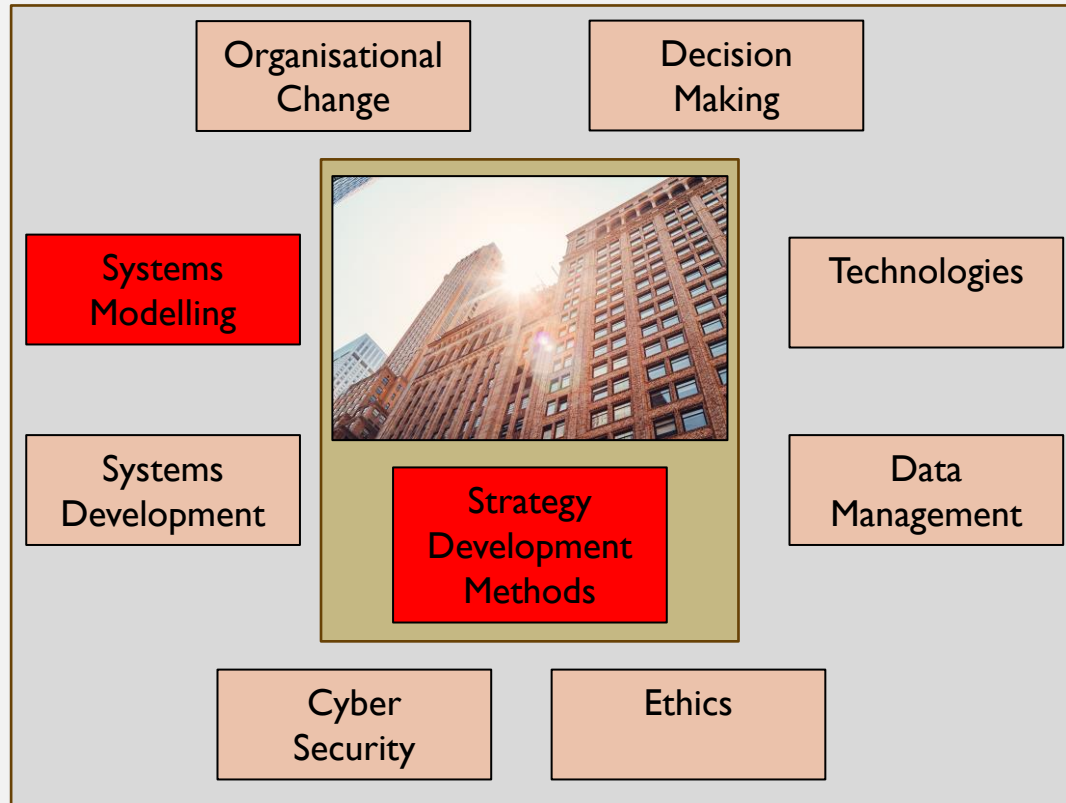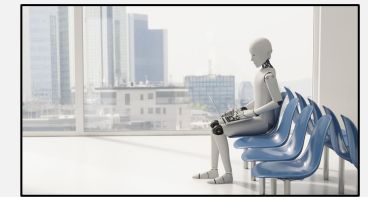

Markets

Customers

Suppliers

Organisational Change	Decision Making
Systems Modelling	Technologies
Systems Development	Data Management
Cyber Security	Ethics

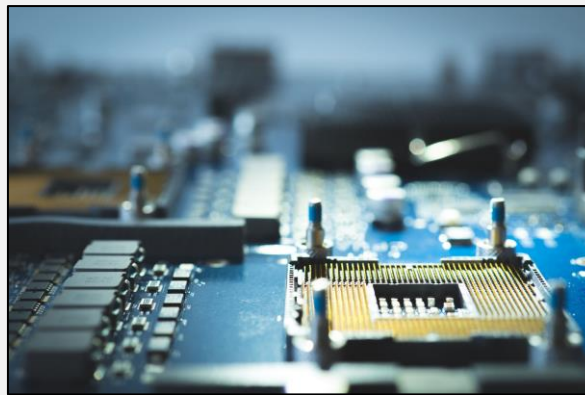Strategy Development Methods

Government

Disruptive Tech

Competitors

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4

Moving into a Digital World
Digital transformation of an industry

e-Commerce isn't just on-line shopping.

"Electronic commerce (e-commerce) is the conducting of business activities e.g. distribution, buying, selling, marketing, and servicing of products or services) electronically over computer networks." – Stair and Reynolds

So what kind of e-Commerce model(s) best suits our business?
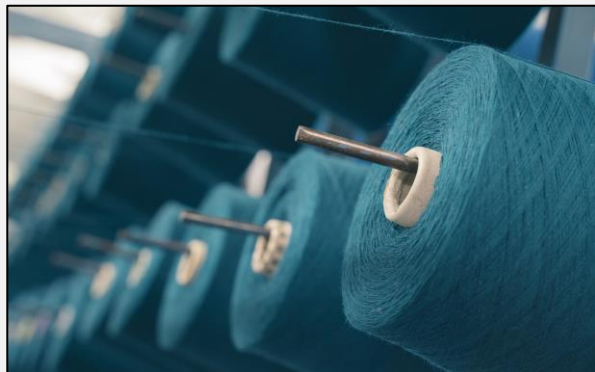
WHAT HAPPENS WHEN E-COMMERCE TECHNOLOGY AND OLD BUSINESS MODELS COLLIDE?

Our understanding of technology and alignment to needs can't be static. It must be agile so we can quickly react to market or industry forces.

When Napster emerged in the late 1990s the music industry went berserk.

Bands like Metallica railed against Napster because they enabled users to share music for free i.e. no revenue for the recording companies.

Napster case study (6 minutes)

Questions for you
- Did Napster destroy the old and create the music industry we have today?
- The impact of this technology disrupted the music industry, but did it simply accelerate a change that was going to inevitably happen?

Understanding e-Commerce Consumers

- Digital Immigrants, Natives and Dependents

    - Digital Natives – the generation that has grown up around digital devices.

    - Digital Immigrants – typically older but still very comfortable with technology. Tend to have clear differentiation of channels.

    - Digital Dependents – typically younger and expect to be able to leverage broadband, constant connectivity to search and complete purchases.

- Need for convenience

    - Convenience has always been a priority for consumers but expectations are much higher now and tolerance for inconvenience due to technical issues, product availability, poor pricing is less acceptable.

    - Question – should we consider mobile commerce as a separate topic or is it synonymous with e-Commerce?
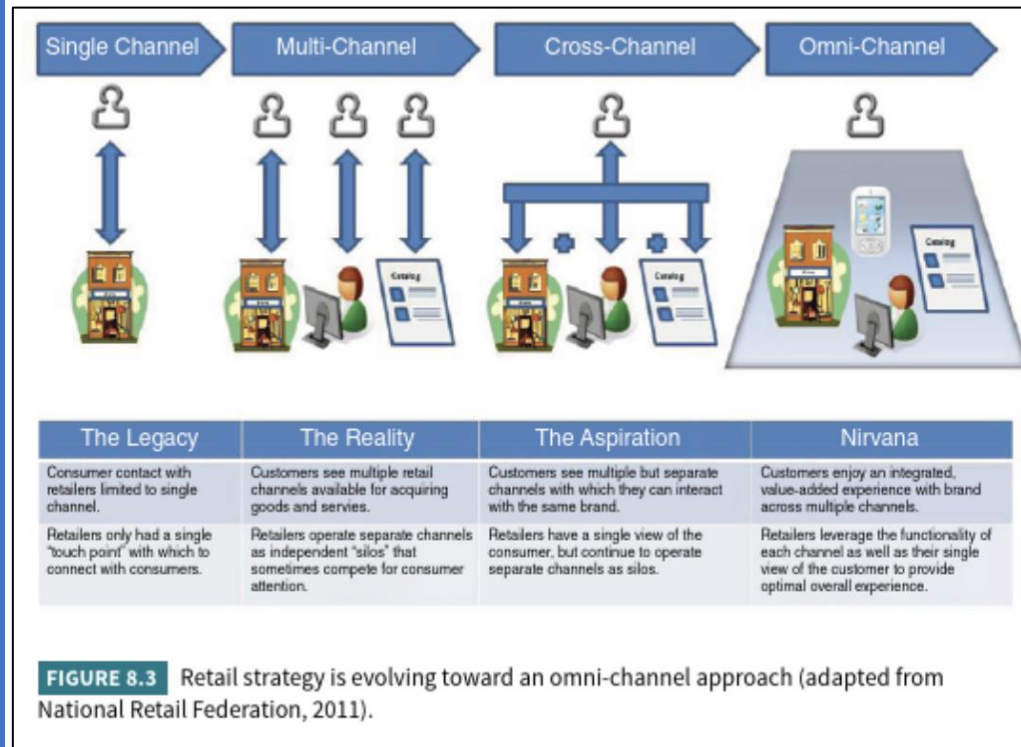
Understanding e-Commerce consumer behaviours

- Empowered price sensitivity

  - The e-Commerce marketplace connects significantly more sellers and consumers compared to previous business models

  - Product alternatives and substitutes can be more easily identified, priced, and purchased.

- Nonlinear searching

  - Traditionally mass media advertising direct consumers to a brand, product or seller in a linear fashion e.g. Direct mail, TV or print advertising.

  - e-Commerce marketing results in non-linear search patterns where consumers are free, or guided, to consider a variety of products and alternatives

- Channel hopping

  - An increasing number of communication channels, particularly through Social Media, creates influence that impacts consumer behaviour.

  - Consumers purchase products from multiple channels e.g. online (mobile, tablet, desktop), "bricks and mortar" or through an aggregator.

  - Aggregation of products through sellers like Amazon increase the variability of consumer behaviour.

e-Commerce Competition

- e-Commerce created a new channel that enabled retailers to connect with consumers.

- Some operated direct to the consumer or partnered with other organisations to complementary consumer offerings.

- The proliferation of social media increases channel management but offers significant opportunity to command and influence buying behaviours.

Does the current state of e-Commerce meet the description of the Omni Channel model?

Single Channel	Multi-Channel	Cross-Channel	Omni-Channel
The Legacy	**The Reality**	**The Aspiration**	**Nirvana**
Consumer contact with retailers limited to single channel.	Customers see multiple retail channels available for acquiring goods and servies.	Customers see multiple but separate channels with which they can interact with the same brand.	Customers enjoy an integrated, value-added experience with brand across multiple channels.
Retailers only had a single "touch point" with which to connect with consumers.	Retailers operate separate channels as independent "silos" that sometimes compete for consumer attention.	Retailers have a single view of the consumer, but continue to operate separate channels as silos.	Retailers leverage the functionality of each channel as well as their single view of the customer to provide optimal overall experience.

FIGURE 8.3 Retail strategy is evolving toward an omni-channel approach (adapted from National Retail Federation, 2011).

Amazon versus Walmart

SO HOW CAN WE VISUALISE OPTIONS FOR ENTERING INTO A DIGITAL WORLD?

WE CAN CLASSIFY BOTH E-COMMERCE RELATIONSHIPS AND BUSINESS MODELS.

NOTE THAT THIS CAN BE LINKED TO OUR STRATEGY DIAMOND.

E-Commerce Relationships

We can classify e-Commerce by thinking about bi-directional transactions between two or more actors.

Transactions may be one off or recurring. They may be single or multiple transactions.

1. Business to Consumer (B2C)

   • Online retail, banking, etc.

   • Enables disintermediation

2. Business to Business (B2B)

   • Connects business organisations.

   • Procurement, supply chain management, financial transactions, etc.

3. Consumer to Consumer (C2C)

   • Enables individual consumers to exchange goods and services directly.

   • Online marketplaces, financial transactions, etc.

4. Government to Citizen (G2C)

   • Improve government relationships with citizens

   • Taxes, healthcare, support services, etc.

E-COMMERCE BUSINESS
IDENTIFYING THE RIGHT MODELS FOR OUR BUSINESS

Sales Revenue	Advertising	Subscription/Advertising	Fee for service or transaction

Marketing	Infomediaries	Hybrid

Model Objectives (one or more)

- Improve or destroy markets
- Create new markets
- Increase revenue and/or decrease costs
- Improve organisational capacity and agility

E-COMMERCE BUSINESS MODELS - SALES REVENUE MODEL

- The Sales Revenue model is the most obvious and familiar to most e-Commerce consumers

- Uses e-commerce to support sales activities by providing access to product/services via catalogue or other format.

- Includes provision of digital content such as video, music, images, etc

- Can be challenging for both the consumer and seller where there is no existing relationship.

- Creates uncertainty and consumer reluctance.

- Creates issues with copyright infringements and the need for protection of intellectual capital although enforcement can be expensive and difficult.

How can online sellers reduce consumer reluctance and encourage buying?

ECOMMERCE BUSINESS MODELS

- Advertising Model

  - Provides advertising services but requires a sufficiently large or specialised user base to attract businesses wanting to advertise.

- Advertising/Subscription

  - Offers content that encourages consumers/organisation to subscribe.

  - Mixed revenue comes from both advertising and subscriptions.

  - Consumers pay a subscription fee and accept some level of advertising.

- Fee for Service

  - Charges for the provision of value add services e.g. game upgrades, specific interests, etc.

  - Can support financial transactions e.g. credit card payments, PayPal, Kickstarter, etc.
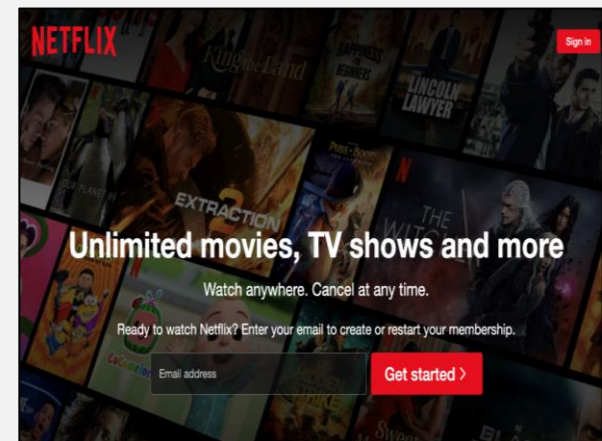
ECOMMERCE BUSINESS MODELS

Marketing

Attract consumers and organisations to the web site. Includes not for profit and community groups.

Intended to build brand and/or product awareness. Objective is to engage and influence consumer behaviour.

Build trust and deliver value through the relationship

Infomediaries

Collects and provides data that can be used by e-commerce and traditional business models.

Monitors consumer online behaviour, analyses the data and sells this information e.g. search engines queries, purchase patterns, product comparisons, etc.

Enables consumer specific targeted marketing but also supports business initiatives such as marketing campaigns, advertising, etc.

Through "cookies" are now more independent and less reliant on infomediaries but their abilities are still limited (buy vs build decision)

Hybrid

Combination of the business models and probably the most common form of ecommerce model.

Various revenue streams and maybe highly variable.

THE CHALLENGES OF ECOMMERCE

In Class Challenge: pick one of the challenges and describe how you will respond.

Defining an effective and achievable ecommerce strategy

Data privacy and security

Lack of consumer trust

Evolving legislative frameworks and regulations

Culture and language issues

Reliable infrastructure

Payment systems and exchange rates

Governance of ecommerce systems

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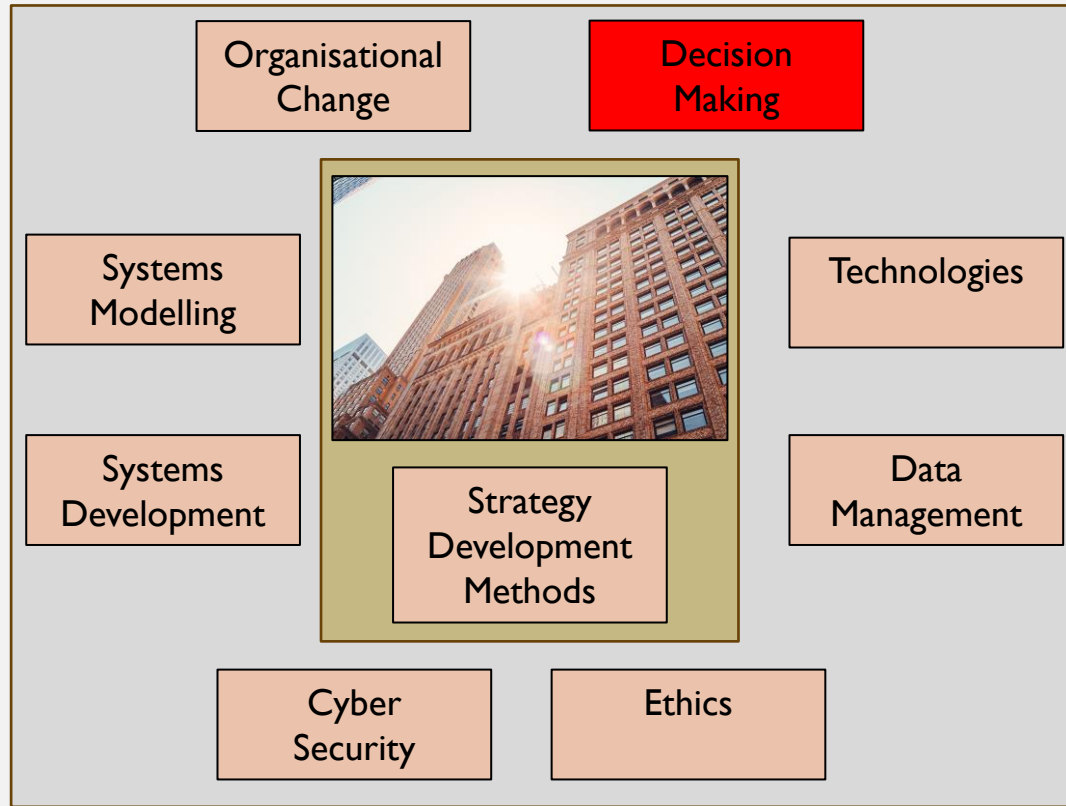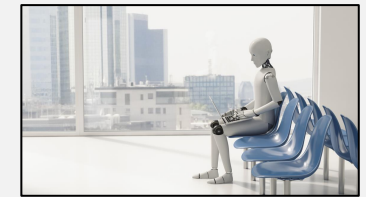
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Decision making by managers

MANAGERIAL DECISION-MAKING CHALLENGES

1 Managers need to analyse large amounts of information
Innovations in communication and globalisation have resulted in a dramatic increase in the variables and dimensions people need to consider when making a decision, solving a problem or appraising an opportunity.

2 Managers must make decisions quickly
Time is of the essence and people simply do not have time to sift through all the information manually.

3 Managers must apply sophisticated analysis techniques, such as Porter's strategies or forecasting, to make strategic decisions
Due to the intensely competitive global business environment, companies must offer far more than just a great product to succeed.
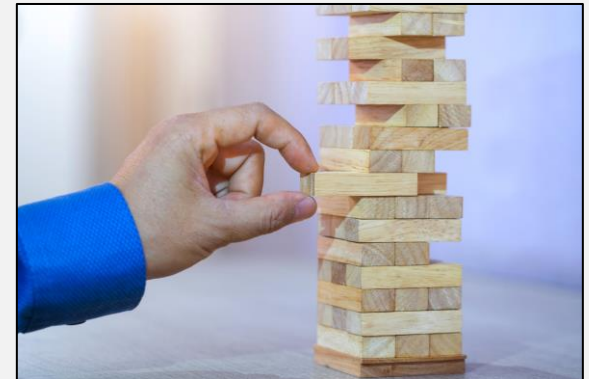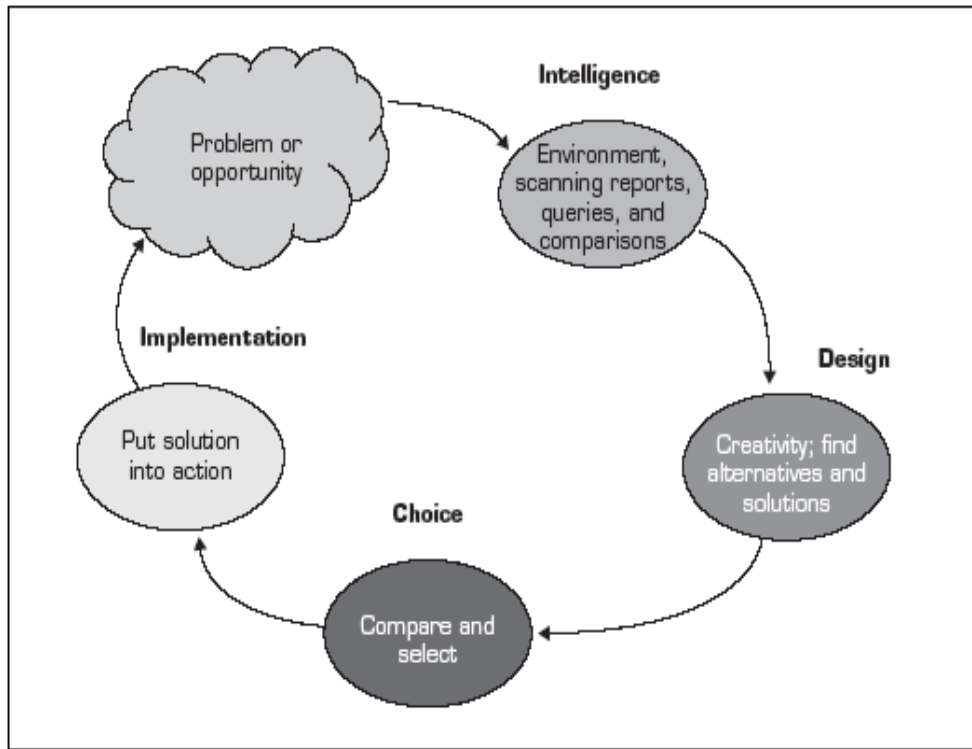
When we work in an Information Economy, we need to consider the availability and cost benefit of acquiring the knowledge needed to make a timely decision.

HOW CONFIDENT ARE WE IN OUR DECISION-MAKING ABILITY?

- It's great that we are making strategic decisions but are we getting it right?

- Do we have a sound, repeatable decision-making process that is sufficiently transparent and we're confident it delivers realistic, defendable decisions?

- Three ways to make a decision:

  1. Simon's model

  2. Heuristics

  3. Structured and Unstructured decisions

Intelligence

Problem or opportunity → Environment, scanning reports, queries, and comparisons

Implementation

Design

Put solution into action

Creativity; find alternatives and solutions

Choice

Compare and select

Can you suggest a fifth phase?

Sharda et al 2014

Degree of structuredness – Herbert Simon's four-phase decision making process from *The New Science of Management Decision* (1977)

1. **Intelligence**
2. **Design**
3. **Choice**
4. **Implementation**

Types of control in all managerial activities

- Strategic planning
- Tactical control
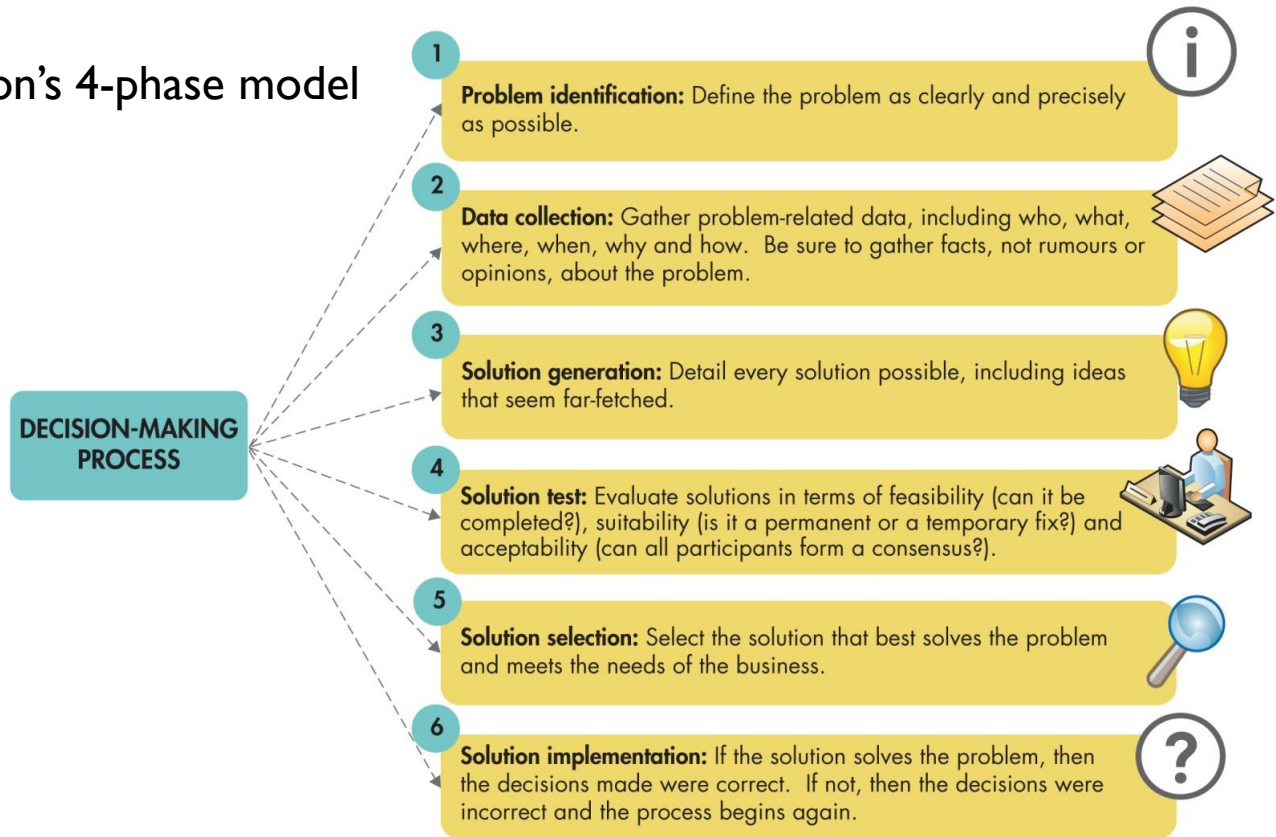- Operational control

19

Stages of Decision Making

THE DECISION-MAKING PROCESS

Expanded version of Simon's 4-phase model

1. Intelligence

2. Design

3. Choice

4. Implementation

DECISION-MAKING PROCESS

1 **Problem identification:** Define the problem as clearly and precisely as possible.

2 **Data collection:** Gather problem-related data, including who, what, where, when, why and how. Be sure to gather facts, not rumours or opinions, about the problem.

3 **Solution generation:** Detail every solution possible, including ideas that seem far-fetched.

4 **Solution test:** Evaluate solutions in terms of feasibility (can it be completed?), suitability (is it a permanent or a temporary fix?) and acceptability (can all participants form a consensus?).

5 **Solution selection:** Select the solution that best solves the problem and meets the needs of the business.

6 **Solution implementation:** If the solution solves the problem, then the decisions made were correct. If not, then the decisions were incorrect and the process begins again.

What are Heuristics ?

- A heuristic is a *prototypical* model of a decision event.

- It allows us to make decisions based on having made a similar decision in the past.

- An informal, intuitive, rules-of-thumb, judgmental knowledge of an application area

  - *Availability*: based on how readily one can remember similar events

  - *Representativeness*: based on adherence to a prototype model or class

  - *Anchoring*: based on adjusting from an initial anchoring point

Do you think having subject matter experts improve or decrease the likelihood making a good heuristic decision?

Heuristic Techniques

Are ways to approach solving a problem

Mental shortcuts in thinking process of problem solving

Solutions are not expected to be 'perfect'

Aid to creative thinking when overcoming a problem

http://www.free-management-ebooks.com/news/heuristic-techniques-for-problem-solving/

DECISION-MAKING — STRUCTURED (PROGRAMMED) AND UNSTRUCTURED

Structured decisions (programmed)
occur in situations where established processes offer potential solutions, generally computed.

Semistructured decisions
occur in situations in which
a few established processes help to evaluate potential solutions, but not enough to lead to a definite recommended decision.
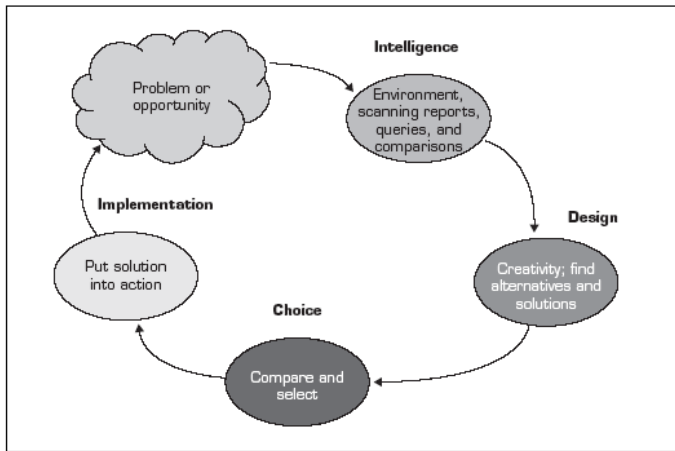
Unstructured decisions occur in situations in which no procedures or rules exist to guide decision makers towards the correct choice, requires intuition, experience and judgement.

Figure: Simon's decision-making model showing Intelligence (Environment, scanning reports, queries, and comparisons), Design (Creativity; find alternatives and solutions), Choice (Compare and select), and Implementation (Put solution into action), starting from Problem or opportunity.

Consider and answer the following:

- What information do you need to make a decision?

- How will you organize your thoughts so you can make a good decision?

- What actions will you take?

Document your ideas and describe the process using Simon's model.

Be prepared to share with the class.

Also, is there anything unusual about this scenario that raises some academic issues?

In class exercise - Making decisions (20 minutes)

Scenario: The Road Trip vs. The Urgent Job Interview

- You and three of your closest friends have been planning **a weekend road trip to a beautiful national park** for months.

- The trip is meant to be a way to **relax before final exams**, strengthen your friendship, and celebrate getting through a tough semester.

- You have already **paid for your share of the costs**, including a **rental cabin, gas money, and activity fees**, and most of it is **non-refundable**. Everyone is excited, and this might be the last chance you all have to do something together before summer break. If you **back out**, your friends may be disappointed, and the costs will increase for the rest of the group.

- However, the **day before departure**, you receive an unexpected call: a manager at a local café where you applied weeks ago finally invites you for an **interview for a summer job**. It's a casual position, but you really **need the money** to help cover your expenses over the break. **If you miss this interview, you may not get another chance, and you really can't afford to be unemployed for the summer.**

- The café is hiring urgently, and they are making hiring decisions the same day—rescheduling is **not an option**.

- Now, you must make a difficult decision: **Go on the trip** and enjoy time with your friends, even though it might cause financial stress later OR **Stay for the interview** and improve your financial situation, but miss out on the trip and possibly upset your friends.

23

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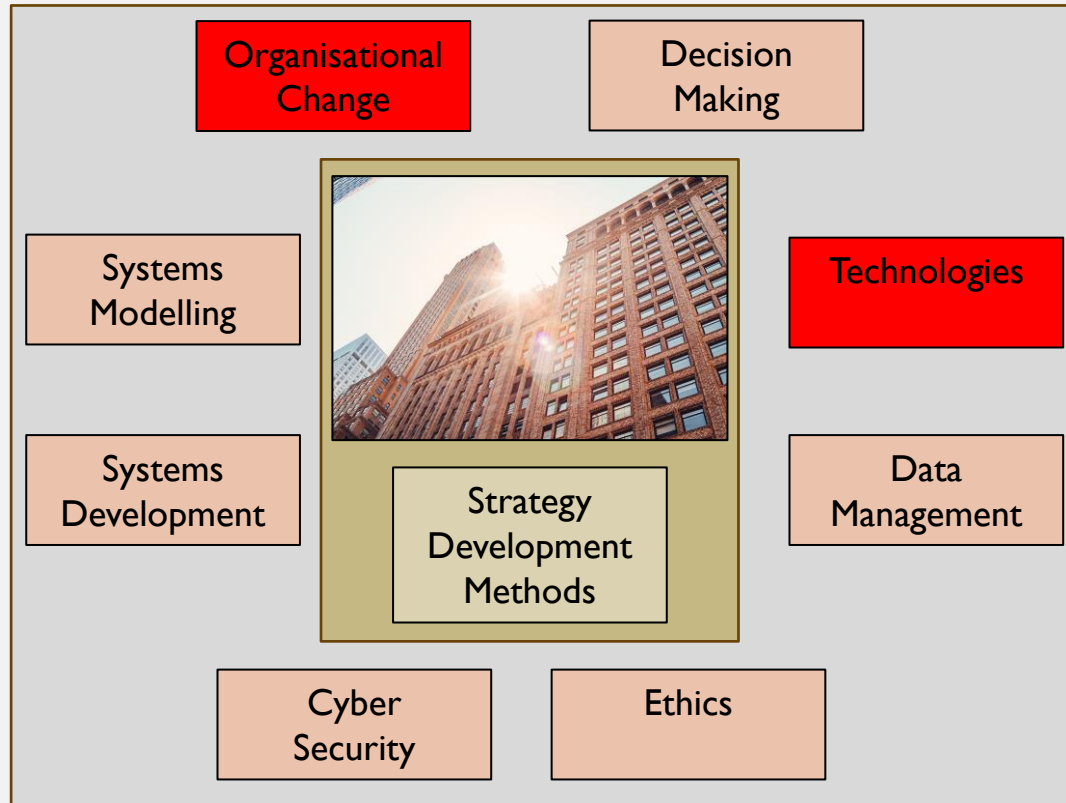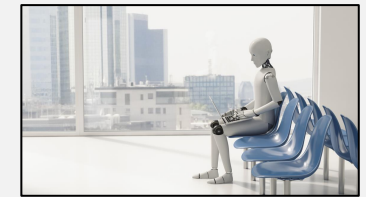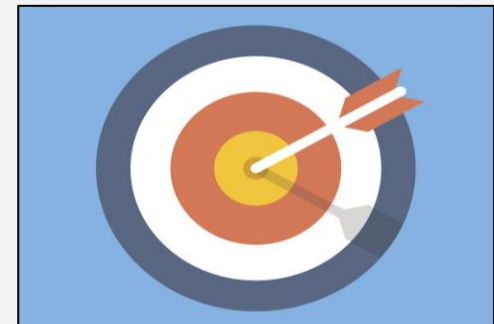

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TIME TO ACT BUT…

- From our first few weeks, we have the following:

  - ✓ A picture of our business that helps us define the Business Strategy (BMC, Rich Picture)

  - ✓ An understanding of what technology we have (Enterprise Architecture, Rich Picture)

  - ✓ A strategic direction for our information systems (IS Strategy)

  - ✓ A plan to create and maintain our social media presence (Social Media Strategy)

  - ✓ A way to move our business into a Digital world (e-Commerce/Strategic Diamond)

  - ✓ An approach for decision making (Simon, etc.)

- We now must put our plans into action but we need to address a significant challenge that's common in industry.

How can we simplify the management of operational systems so we can focus on more strategic technology initiatives?

- Suppose you are the CIO of a large hospital.

- What's more important to your organisation:

  - Having an accounting system so you can bill a patient OR

  - Giving clinicians online access to a patients entire health history for diagnoses, medications, operations, etc.

  - Which of these systems do you think is more strategic?

- There are a number of information systems that work across the enterprise and provide common functionality e.g. accounting, inventory, supply chain, payroll, etc.

- Over the last 20 years organisations have moved away from building and managing their own systems in favour of buying an information system from a vendor.

- These systems are typically referred to as Enterprise Resource Planning (ERP) systems.

- Because an ERP vendor is now employed to keep these information systems up to date, organisations can dedicate more resources to work on initiative that support our technology strategies.
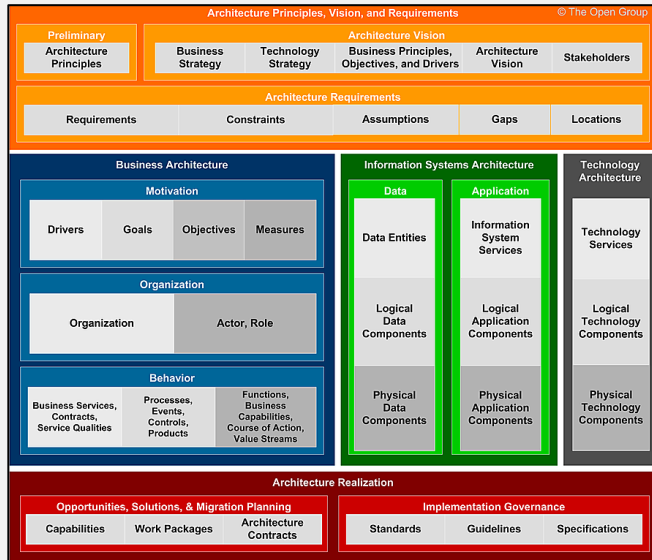
ENTERPRISE RESOURCE PLANNING (ERP) FUNDAMENTALS

- Many organisations implement ERP systems with the intent of improving business performance through operational enhancement and better integration.

- Moving from disparate systems to an integrated solution can deliver benefits through reduced IT operating costs, better data governance, improved business processes, etc.

- ERP – integrates all departments and functions throughout an organisation into a single IT system (or integrated set of IT systems) so that employees can make decisions by viewing enterprise-wide information on all business operations

- ERP is an organisation's backbone because it integrates core business areas such as supply chain, manufacturing, distribution, financials and human resources into modules.

- ERP enables a single seamless transaction to cut across functional boundaries.

- The use of ERP solutions is an enterprise wide approach that supports multiple EA domains, especially the Business Architecture

27

ENTERPRISE SYSTEMS
ENTERPRISE RESOURCE PLANNING

- ERP vendor offer technology solutions that can be used across the enterprise

- Functionality is often modular and integrated to provide "seamless" exchange of information across the system.

- Enables standardisation and potentially improvements in business processes as well as optimisation or consolidation of technology and human resources.

- However, ERP implementations are notoriously difficult and frequently fail

28

ERP VENDORS OFFER BROAD FUNCTIONALITY AND INDUSTRY SPECIALISATION

By Category

Enterprise Resource Planning	Human Capital Management	
Supply Chain Management	CRM and Customer Experience	
Financial Management	Sustainability Management	
Spend Management	Small and Midsize Enterprises	
Business Network	View Products A-Z	

Business Technology Platform ›

Application Development and Automation

Artificial Intelligence

Data and Analytics

Extended Planning and Analysis

Integration

By Industry

Automotive

Banking

Consumer Products

Oil, Gas, and Energy

Retail

View all Industries

Explore solutions for your industry

Our solutions help industries worldwide run better, faster, and more profitably while embracing sustainability and corporate social responsibility.

Aerospace and Defence ›	Federal, National, and Central Government ›	Passenger Travel and Leisure ›
Agribusiness ›	Healthcare ›	Professional Services ›
Automotive ›	High Tech ›	Real Estate ›
Banking ›	Higher Education and Research ›	Regional, State, and Local Government ›
Building Materials ›	Industrial Manufacturing ›	Retail ›
Cargo, Transportation, and Logistics ›	Insurance ›	Sports and Entertainment ›
Chemicals ›	Life Sciences ›	Telecommunications ›
Consumer Products ›	Media ›	Utilities ›
Defence and Security ›	Mill Products ›	Wholesale Distribution ›
Engineering, Construction, and Operations ›	Mining ›	
Fashion ›	Oil, Gas, and Energy ›	

CHALLENGES OF IMPLEMENTING ERP

- Overall implementation costs can be very high

- Inadequate executive support and project governance

- End user resistance to changes in business processes

- Insufficient attention to organisational change management

- ERP tech support requires different IT skill sets

- Reluctance to give up customised technology

- Misaligned user expectations (functionality isn't as promised)

- Poor implementation planning (low estimates)

There are many challenges to implementing ERP solutions

↓

The biggest issue facing ERP implementation is that it fundamentally changes the way the entire organisation operates, requiring employees to learn and adjust to new business processes.

↓

Managers must:

| carefully assess the company's needs | choose the right ERP system | ensure proper support for all new processes, while avoiding too much change too fast. |

Integration of disparate IT applications is key to managing the integrated enterprise

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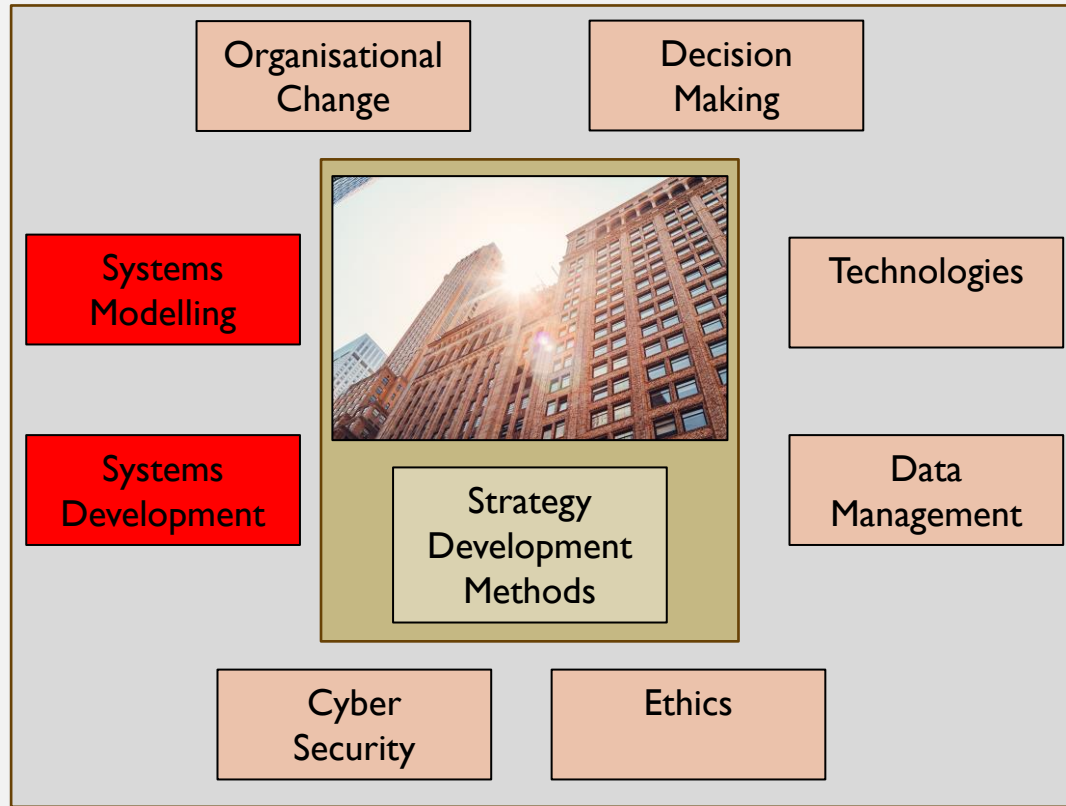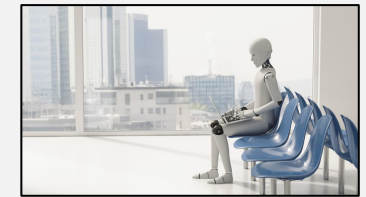

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WHAT IS A SYSTEM DEVELOPMENT METHODOLOGY?

- When we implement or build a system, we follow a system development method.

- The methodology determines how the system is built and drives the involvement of the IT and business area staff.

- A system development method is a set of policies, procedures, standards, processes, tools, and tasks that people apply to technical and management challenges.

- The System Development Lifecycle (SDLC) has changed significantly over the last 20 years.
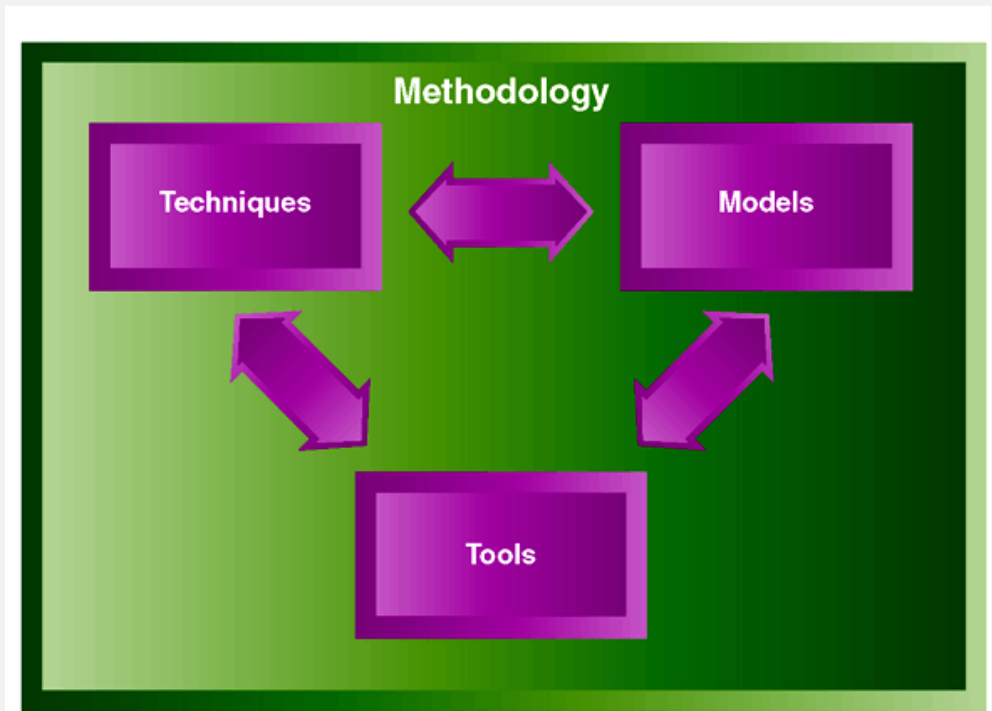
- Different software development methodologies include:
  - **Waterfall** structured methodology
  - **Agile** methodology, including
    - Rapid application development (RAD)
    - Extreme programming (XP) methodology
    - Scrum
  - **Hybrid Waterfall and Agile**
  - **Prototyping**
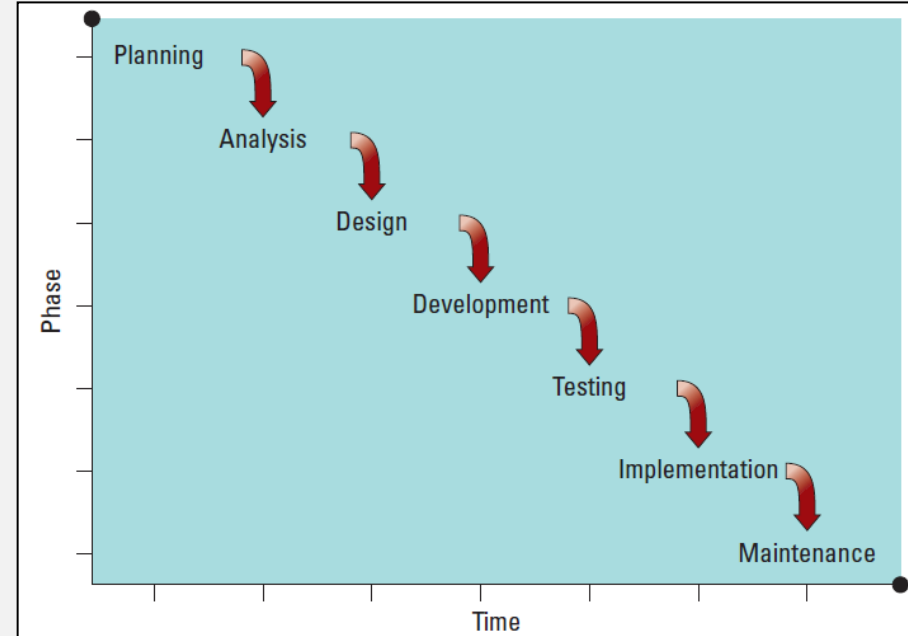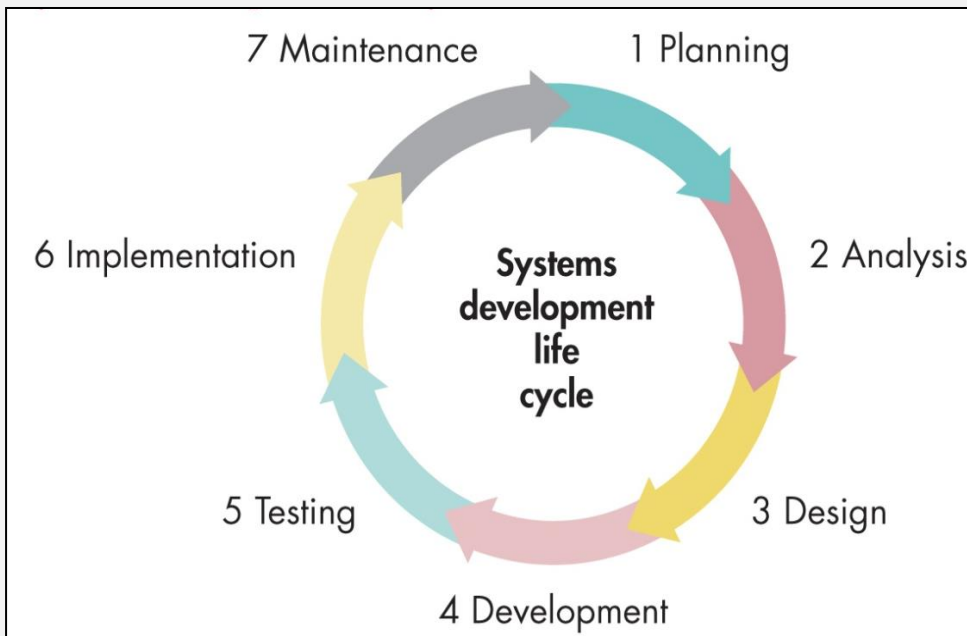
32

THE WATERFALL APPROACH TO THE SDLC

- Waterfall methodology is an activity-based process in which each phase in the SDLC is performed sequentially and relies on achieving each milestone with an obvious lack of timely feedback.

- A very traditional development methodology that can be predictable but slow to provide insights into how the system will actually work.

DEVELOPING THE BUSINESS ARCHITECTURE
PRINCIPLES OF DESIGN THINKING (DT)

Developing systems from requirements can be done in multiple ways.

Delivering value from technology in a business or social setting requires us to understand the requirements and the problem that we are trying to solve.
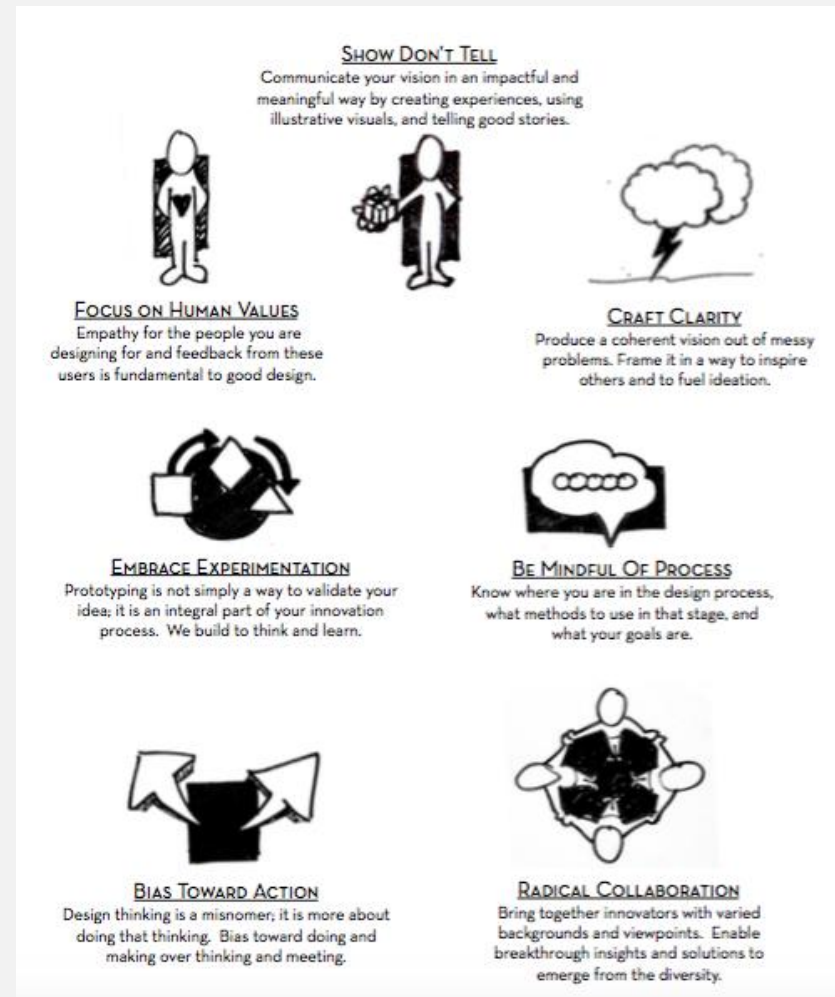
Historically, this is not something that IT professionals have done well.

Design Thinking provides a process that enables Business and IT to work together to solve some relevant, interesting problems.

Sometimes, you just have to ask the right question!!

SHOW DON'T TELL
Communicate your vision in an impactful and meaningful way by creating experiences, using illustrative visuals, and telling good stories.

FOCUS ON HUMAN VALUES
Empathy for the people you are designing for and feedback from these users is fundamental to good design.

CRAFT CLARITY
Produce a coherent vision out of messy problems. Frame it in a way to inspire others and to fuel ideation.

EMBRACE EXPERIMENTATION
Prototyping is not simply a way to validate your idea; it is an integral part of your innovation process. We build to think and learn.

BE MINDFUL OF PROCESS
Know where you are in the design process, what methods to use in that stage, and what your goals are.

BIAS TOWARD ACTION
Design thinking is a misnomer; it is more about doing that thinking. Bias toward doing and making over thinking and meeting.

RADICAL COLLABORATION
Bring together innovators with varied backgrounds and viewpoints. Enable breakthrough insights and solutions to emerge from the diversity.

d.school Bootcamp Bootleg. (2010). *Hasso Platner, Institute of Design at Stanford.*

What is Design Thinking?

AGILE SOFTWARE DEVELOPMENT METHODOLOGIES

Agile methodology aims for customer satisfaction through early and continuous delivery of useful software components developed by an iterative process using the bare minimum requirements.

The four core values of Agile software development as stated by the Agile Manifesto are:

1. Individuals and interactions over processes and tools;
2. Working software over comprehensive documentation;
3. Customer collaboration over contract negotiation; and
4. Responding to change over following a plan.

35

Many organisations claim to do Agile but few do it well

THE 12 PRINCIPLES OF AGILE

1. Our highest priority is to **satisfy the customer** through early and continuous delivery of valuable software.

2. **Welcome changing requirements**, even late in development. Agile processes harness change for the customer's competitive advantage.

3. Deliver working software frequently, from a couple of weeks to a couple of months, with a **preference to the shorter timescale**.

4. Business people and developers must **work together daily** throughout the project.

5. Build projects around **motivated individuals**. Give them the environment and support they need and **trust them to get the job done**.

6. The most efficient and effective method of conveying information to and within a development team is **face-to-face conversation**.

7. **Working software** is the primary measure of progress.

8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to **maintain a constant pace indefinitely**.

9. Continuous attention to technical excellence and good design enhances agility.

10. **Simplicity**--the art of maximizing the amount of work not done--**is essential**.

11. The best architectures, requirements, and designs emerge from **self-organizing teams**.

12. At regular intervals, **the team reflects on how to become more effective**, then tunes and adjusts its behavior accordingly.

THE BUSINESS INFORMATION SYSTEMS ECOSYSTEM
COURSE STRUCTURE

In this course we examine how business information systems impact the inner workings of a business and the connections to a broader ecosystem.
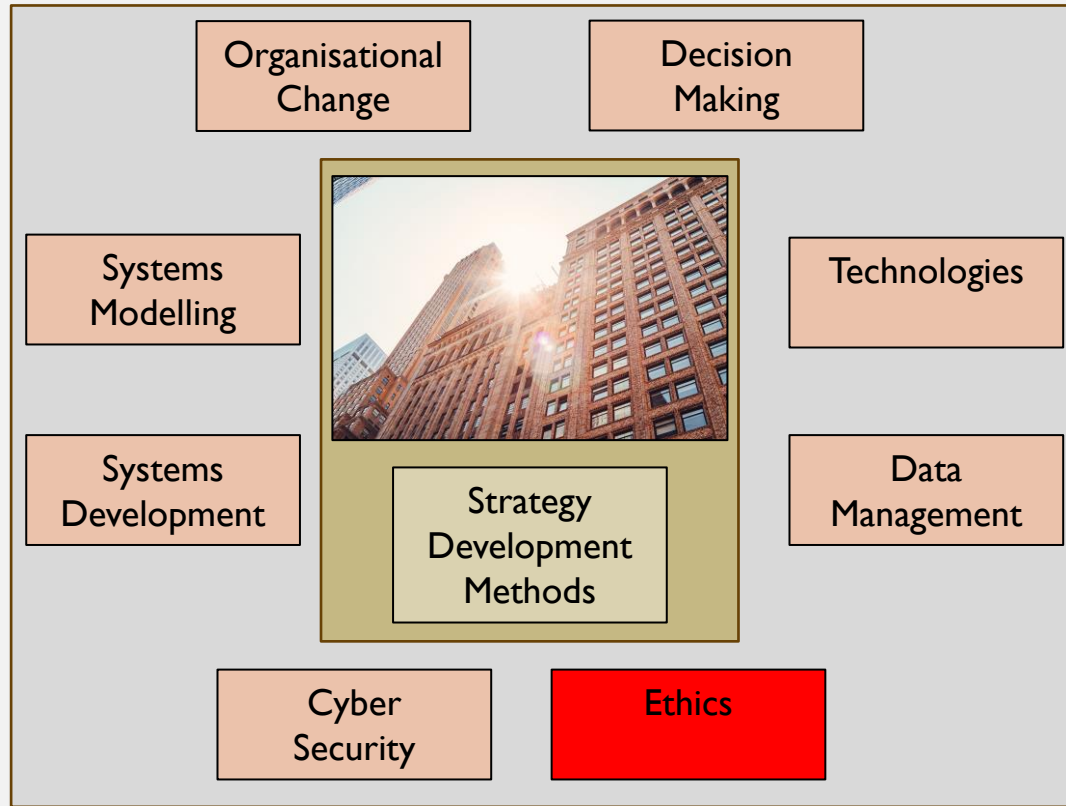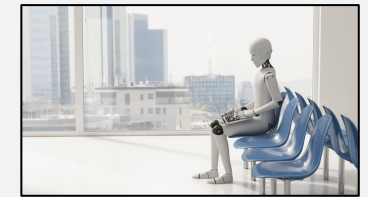
Markets

Customers

Suppliers

Organisational Change

Decision Making

Systems Modelling

Technologies

Systems Development

Strategy Development Methods

Data Management

Cyber Security

Ethics

Government

Disruptive Tech

Competitors

The course focuses primarily on the areas of investigation listed above. By the end of the course, you should have at least an introductory level understanding of each of these areas.

THE ETHICAL IMPACT OF INFORMATION TECHNOLOGY

New technology often introduces ethical challenges that are often recognised but rarely resolved (at least initially)
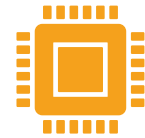
Legislative and legal systems are typically reactive and often lag the evolution of technology e.g. online privacy, data security, consumer rights, etc.

So how should we deal with these ethical challenges particularly with disruptive technologies such as smartphones, facial recognition, social media, etc.?

WHAT DO WE MEAN BY ETHICS?

- Ethics - three different but related meanings:
  - An area of philosophical investigation. Questions related to acceptability and correctness of behavior and individual behavioral choices.
  - Norms of acceptability and correctness of individual behavior, particularly in area and contexts not covered under legal rules and regulations.
  - The set of rules that guide professional behavior within specific contexts e.g. Ethics of Informatics, ethics in law, media ethics etc.
    - Laudon and Laudon (1998)

AM I BEING ETHICAL?

1. Would I be happy for this decision to be headlining the news tomorrow?

2. Is there an ethical non-negotiable at play?

3. Will my action make the world a better place?

4. What would happen if everybody did this?

5. What will this do to my character or the character of my organisation?

6. Is this consistent with my values and principles?

ANU says it is wrong to plagiarise or contract someone else to write your assignment.

- *What happens when we apply the guiding rules?*

- *Have we demonstrated that these acts are unethical?*

- "What is best for a given individual is right"
- self preservation
- *Psychological Egoism* asserts that a basic fact of human nature is that people are always motivated by self-interest or self-benefit.

Question – is the right to free speech an example of egoism?

ETHICAL PHILOSOPHIES - EGOISM

41
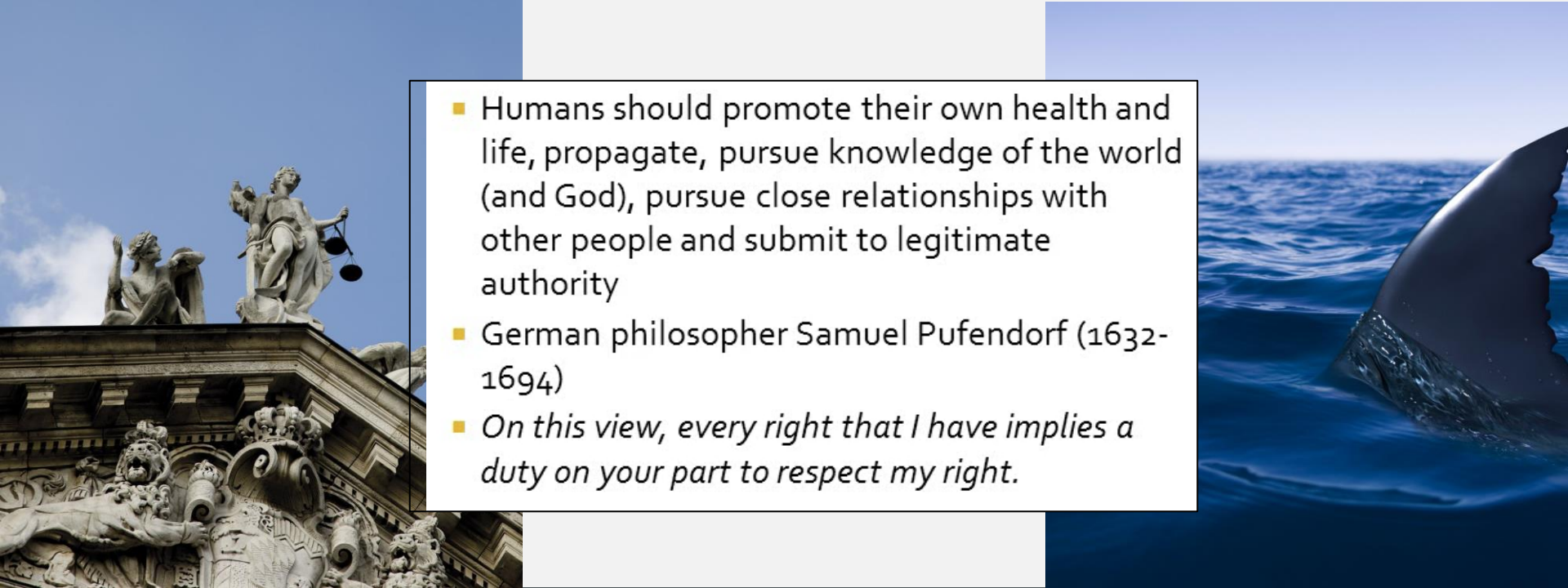
- Humans should promote their own health and life, propagate, pursue knowledge of the world (and God), pursue close relationships with other people and submit to legitimate authority
- German philosopher Samuel Pufendorf (1632-1694)
- *On this view, every right that I have implies a duty on your part to respect my right.*

ETHICAL PHILOSOPHIES – NATURAL LAW

In contrast to laws written by humans the philosophy of natural law proposes that there are laws that exist simply by participating in a natural system e.g. we all agree that using Artificial Intelligence (AI) to make a life and death decision is against natural law

ETHICAL PHILOSOPHIES - UTILITARIANISM

- Those actions are right that produce the greatest good for the greatest number of people
- "The needs of the many outweigh the needs of the few"
- Jeremy Bentham (1748 - 1832)
  - **Hedons:** units of pleasure
  - **Dolors:** units of pain.

If we have limited technical resources the application of utilitarianism can guide the design and implementation of information systems – but is there a downside?
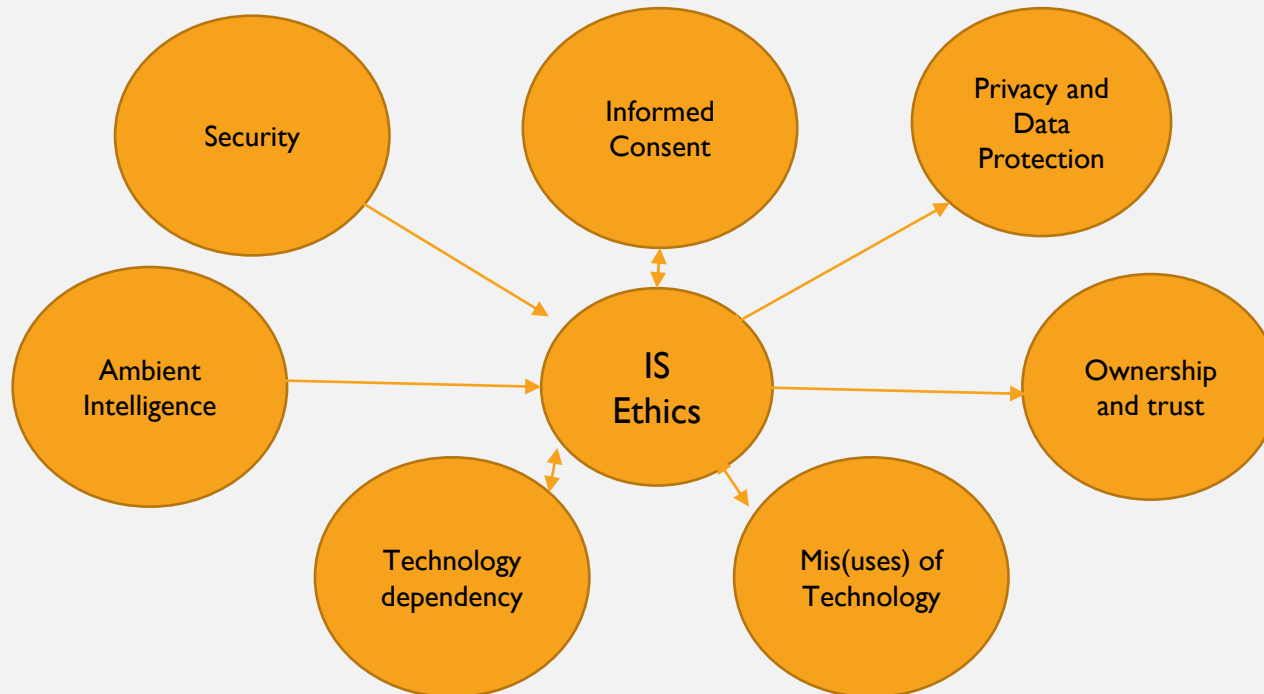
- People should be treated as an end and not as a means to an end.

- Immanuel Kant, *Groundwork of a Metaphysics of Morals*

- "*Act in such a way that you always treat humanity, whether in your own person or in the person of any other, never simply as a means, but always at the same time as an end.*"

ETHICAL PHILOSOPHIES – RESPECT FOR PERSONS

Is collecting your personal information without consent unethical? Are you viewed as a person or a disembodied entity?

IDENTIFYING ETHICAL CONCERNS IN BUSINESS INFORMATION SYSTEMS

"the emergence of a wide variety of new technologies should give us a sense of urgency in thinking about the ethical (including social) implications of new technologies"

Wakunuma, K. J., & Stahl, B. C. (2014). Tomorrow's ethics and today's response: An investigation into the ways information systems professionals perceive and address emerging ethical issues. *Information Systems Frontiers*

AUSTRALIAN COMPUTER SOCIETY
PROFESSIONAL ETHICS

1. **The Primacy of the Public Interest** : You will place the interests of the public above those of personal, business or sectional interests.

2. **The Enhancement of Quality of Life** : You will strive to enhance the quality of life of those affected by your work.

3. **Honesty:** You will be honest in your representation of skills, knowledge, services and products.

4. **Competence:** You will work competently and diligently for your stakeholders.

5. **Professional Development:** You will enhance your own professional development, and that of your staff.

6. **Professionalism:** You will enhance the integrity of the ACS and the respect of its members for each other.

See also ACM Code of Ethics: https://www.acm.org/code-of-ethics

THE ETHICS OF ARTIFICIAL INTELLIGENCE (AI)

As you listen to this video make notes describing the advantages of AI.

Identify the potential ethical challenges that may occur in our personal and professional lives.

What recommendations do you have to deal with these challenges?

Do you believe that the advantages outweigh the ethical risks?

Tom Gruber - Artificial Intelligence

IN CLASS DISCUSSION
THE ETHICAL CHALLENGES OF INFORMATION SYSTEMS

- In this exercise you'll apply two of the ethical philosophies to an identified technological capability.

- Pick two of the following technologies and describe the ethical impact by applying the philosophies of Egoism and Utilitarianism.

    1. Facial Recognition

    2. Algorithms limiting information access

    3. Wearable (or invasive) Technology

    4. Social Media reporting

MID SEMESTER QUIZ

- The quiz is one hour in duration and consists of 80 multiple choice or drag/drop questions.

- This quiz is online (via Wattle) and will cover all material up to and including Week 5.

- **Students must attend the quiz in person**, with their student ID, and a password will be required to access the Quiz. Attendance will be taken.

- Each question is worth one mark and students will not lose a mark for incorrect answers. The published grade for the quiz will be scaled to be out of 100.

- It is your responsibility to ensure that you have good connectivity.

- Students are required to stay in the seminar room until the quiz is closed even if they have finished the quiz.

- **There are no extensions for this assessment.**

WEEK 4 – WRAP UP

- In Week 4, we covered the following:

  - ✓ ERP

  - ✓ SDLC

  - ✓ Ethics

- Keep working on your assessments

- Keep reviewing for the mid semester quiz

- Next weeks seminar will be shortened to give you the opportunity to discuss your BAR. I won't be reading drafts but can answer specific questions.

- See you next week !!