

BUSINESS INFORMATION SYSTEMS (INFSI001)

SEMINAR - WEEK 3

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WEEK 3 AGENDA

Week 2 Review

Enterprise Architecture

E-Commerce Models

Decision Making

Week 3 wrap-up

WEEK 2 REVIEW

- In your opinion, what's the most important requirement for an IS Strategy?
- Describe the Social Media Transformer strategy.

ASSESSMENT OVERVIEW

BAR PART I: REPORT (25%)

- The BIS Assessment Report requires students to investigate a current topic(s) in Business Information Systems.
- The report requires research, analysis and leveraging academic literature to demonstrate a depth of analysis and understanding of the topic(s). Students will be given guidance on working with academic literature in Week 1.
- **Format:** Students will submit a MS Word document via a Turnitin link on Wattle with no more than 2000 words. Text exceeding the word count may not be read.
- **AI USE:** the use of AI such as ChatGPT to generate an essay or report is not allowed as it is akin to plagiarism. Students are required to demonstrate achievement of critical, analytical and synthesis skills in high quality works.
- **Marking criteria:** Further details and marking criteria will be provided on Wattle in Week 1 of the course and will be discussed in class in the first week.
- **Report due date:** Due on Thursday of Week 7 (17/04/25) at 09:00 am via Turnitin on the course Wattle site.
- **Feedback:** Up to 10 working days after submission excluding teaching breaks, etc.



Reminder

ASSESSMENT OVERVIEW

BAR PART 2: ORAL REVIEW (15%)

- Students will attend a 10-minute interactive, **in-person*** Oral Review of their BAR Part I.
- The Oral Review will be recorded, which will enable later validation and verification of assessment, if required, in accordance with point 7 in the ANU Student Assessment Coursework policy.
- The duration of the review is limited to 10 minutes and students must be on time. Additional time will not be added if students are late. Students must show their student ID or equivalent form of identification.
- The review will be conducted by a course grader and students will be required to discuss and defend various aspects of their BIS Analysis Report including their approach to the assignment, application of good quality academic literature and relevance to course concepts.
- It is expected that this review helps students demonstrate their depth of analysis and understanding of the assigned topic. Note that this is **not** a student presentation and slides are not required. Reviews will be recorded for review purposes.
- **Marking criteria:** Further details and marking criteria will be provided on Wattle in Week 1 of the course and will be discussed in class in the first week.
- **Due date:** Students will be assigned a time slot in Weeks 8, 9 and 10 depending on student numbers.

Some sample questions:

1. Why is your position correct?
2. How will your analysis create stakeholder value?
3. In your paper you talk about this model XXX, explain the model.
4. You cited this reference XXX, what were the main themes and why do you think its relevant to your topic?
5. Are there any ethical concerns?
6. Apply a course model or framework to illustrate or expand your analysis.
7. How would you argue against your position?



* Note this is different to the course summary on CMS.

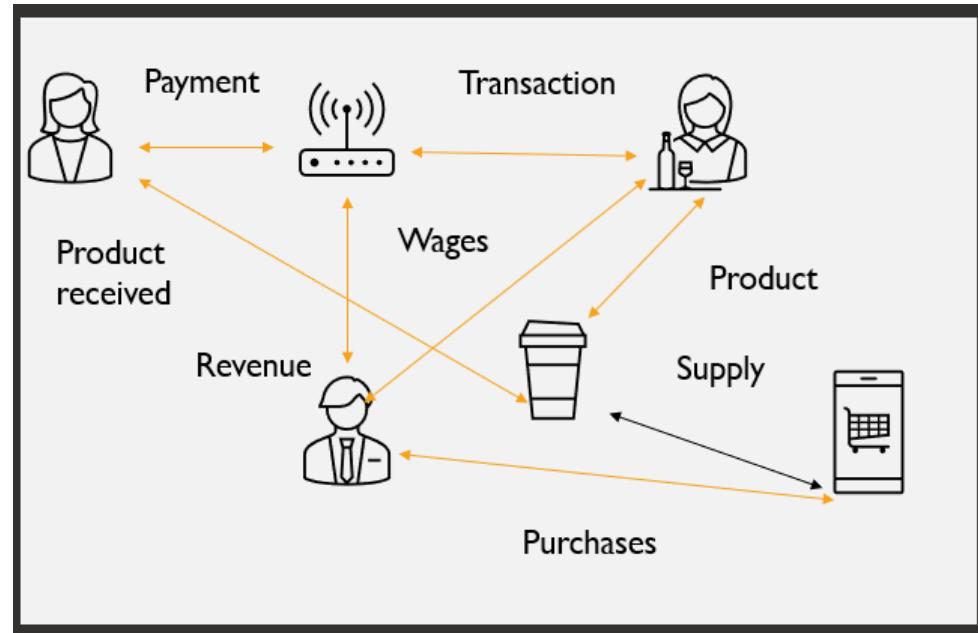


IN CLASS EXERCISE (20 MINUTES)

- **The purpose of this exercise is to draw a Rich Picture that describes a café's use of technology.**
- Work in small groups and follow the process to develop a Rich Picture.
- The level of detail needs to be sufficient so that you could **sit down with the owner** of the café and **convince them that you understand how their organisation** is using technology.
- To develop a Rich Picture
 - Who are the actors involved in this narrative?
 - What types of technology are they using?
 - What's the connection between the actors and the technology?
 - What information flows across this system?
- You should submit one or two PowerPoint slides. You can leverage the graphics on the next slide.
- Email me your deck to devin.clementi@anu.edu.au
- Include a list of your team members on the first slide.
- Note this is not an assessment or homework!! Don't send after the end of class 😊
- Start discussing and drawing!! You have 20 minutes.

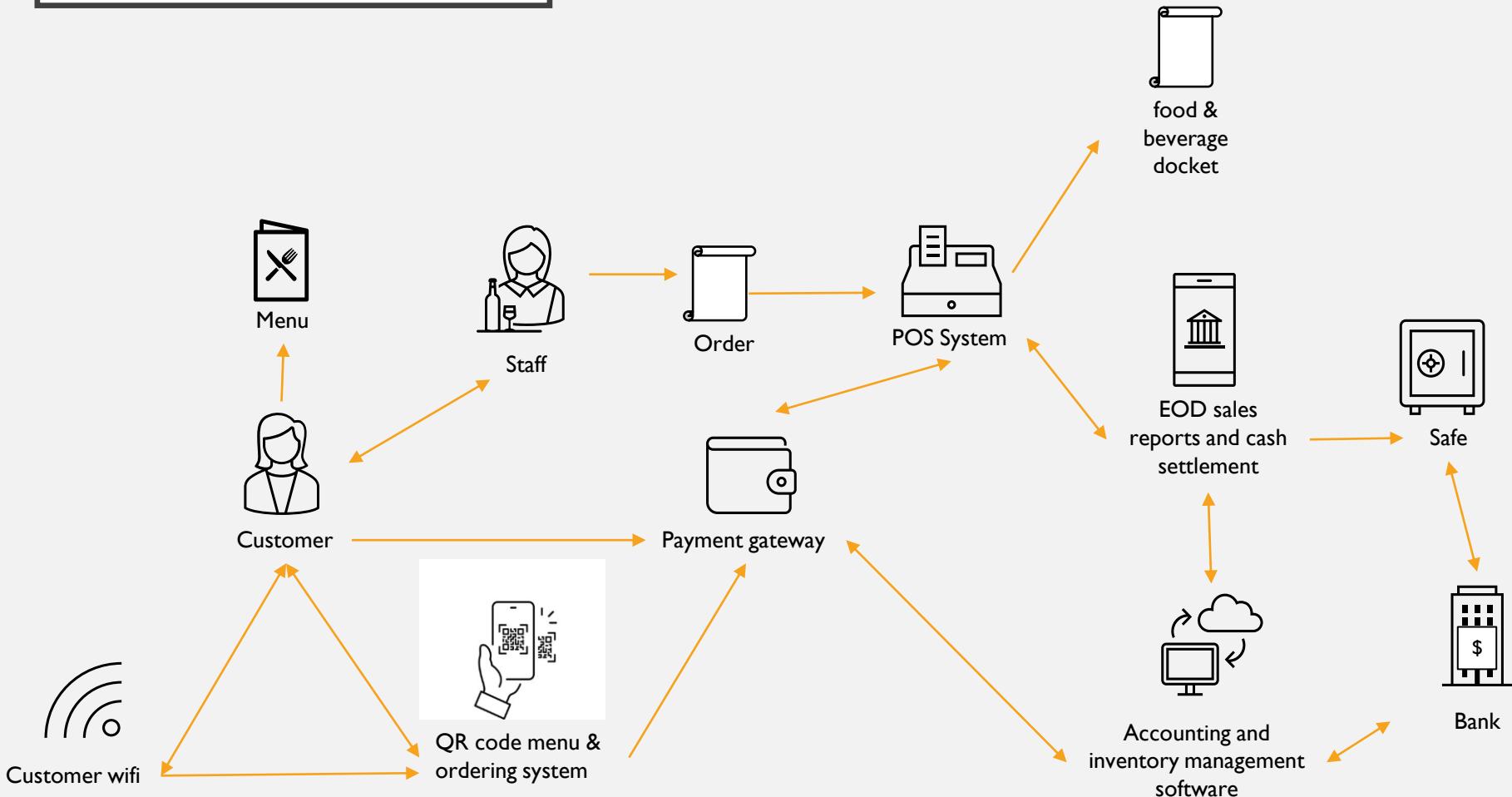
CAFÉ RICH PICTURE

- Needs to be more descriptive
- Identify the actors
- Flows need to reflect sharing of information
- Coffee cup isn't a form of technology 😊



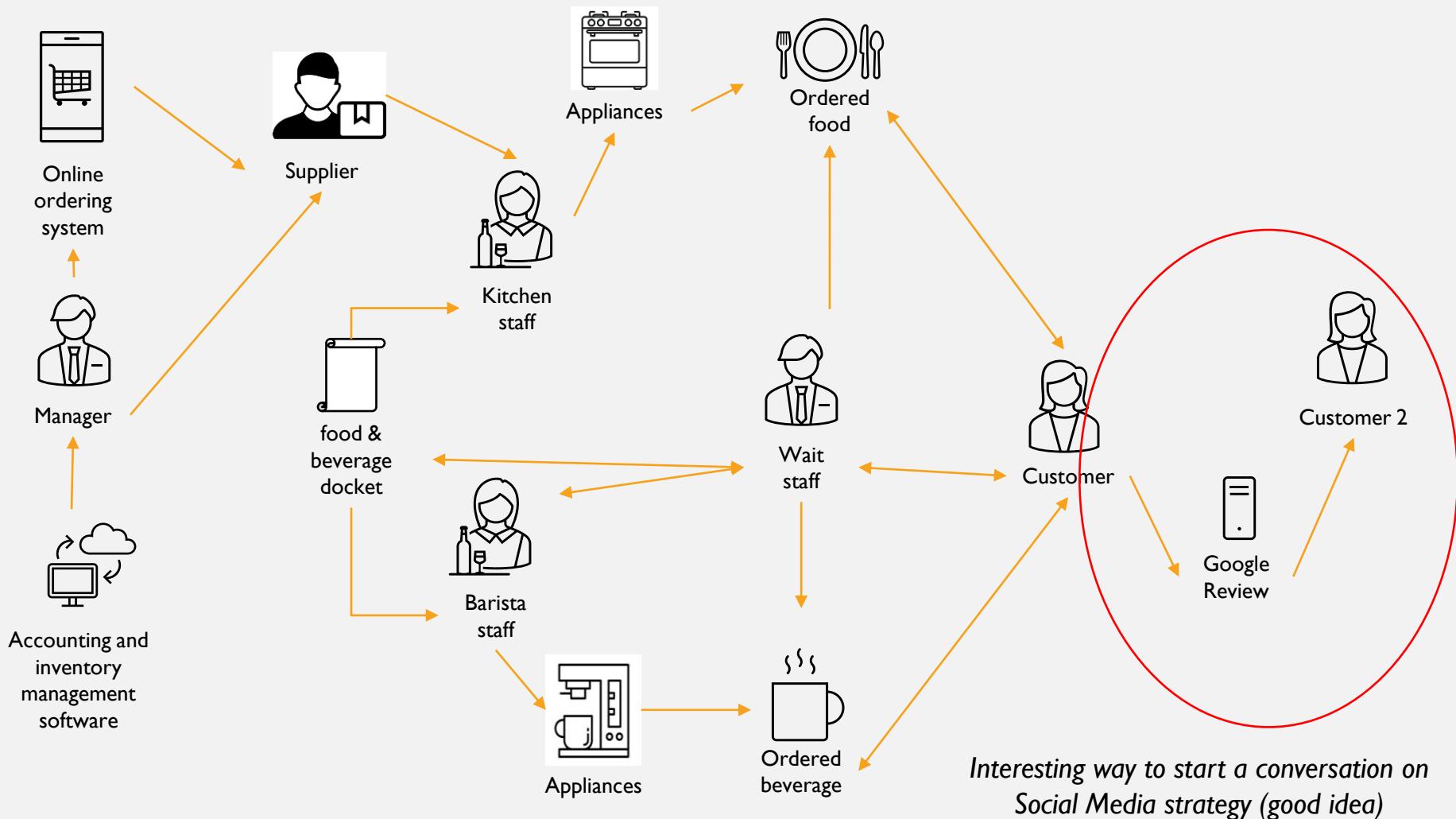
CAFÉ RICH PICTURE

- Identifies the actors and technology
- Needs more detail in the information flows



CAFÉ RICH PICTURE

- Identifies the actors and technology
 - Needs more detail in the information flows



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



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.

WE STARTED BY TALKING ABOUT DEVELOPING A BUSINESS STRATEGY INTRODUCING THE BUSINESS MODEL CANVAS

Key Partners



Who are our Key Partners?
Who are our key suppliers?
Which Key Resources are we acquiring from partners?
Which Key Activities do partners perform?

Interactions and alliances
Information and currency
Acquisition of assets
Acquisition of particular resources and activities

Key Activities



What Key Activities do our Value Propositions require?
Our Distribution Channels?
Customer Relationships?
Revenue Streams?

Productive
Productivity
Platform/Network

Value Propositions



What value do we deliver to the customer?
Which one of our customer's problems are we helping to solve?
What bundles of products and services are we offering to each Customer Segment?
Which customer needs are we satisfying?

Experiences
Innovations
Partnerships
Simplifying the Job Done"
Brand Promise
Price
Cost Reduction
Risk Reduction
Availability
Convenience
Quality

Customer Relationships



What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How easily are they?

Exchanges
Informed Personal Assistance
Multi-channel
Information Services
Co-creation

Customer Segments



For whom are we creating value?
Who are our most important customers?

Mass Market
Segmented
Niche
Multi-channel Platforms



Key Resources



What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

Physical
Financial and intellectual assets, copyrights, ideas
Human
Information

Channels



Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

CHANNEL PHASES
1. Acquisition: how do we attract our target market
2. Evaluation: how do we evaluate our prospects (value proposition)
3. Purchase: how do we facilitate the purchase (product and service)
4. Delivery: how do we deliver value (product and service)
5. After sales: how do we provide post-purchase customer support?



Cost Structure

What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

IN COST REVENUE MODELS:
Cost-driven (cost plus, mark-up, low price value proposition, minimum attractiveness, revenue maximising)
Value-driven (based on value creation, premium value proposition)

Fixed Costs (indirect, fixed, indirect)
Variable Costs (variable, variable, variable)
Economies of scale



Revenue Streams



For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?

How much does each Revenue Stream contribute to overall revenues?

Revenue streams
Asset sales
Usage
Subscription fees
Licensing
Freight
Brokerage fees
Advertising

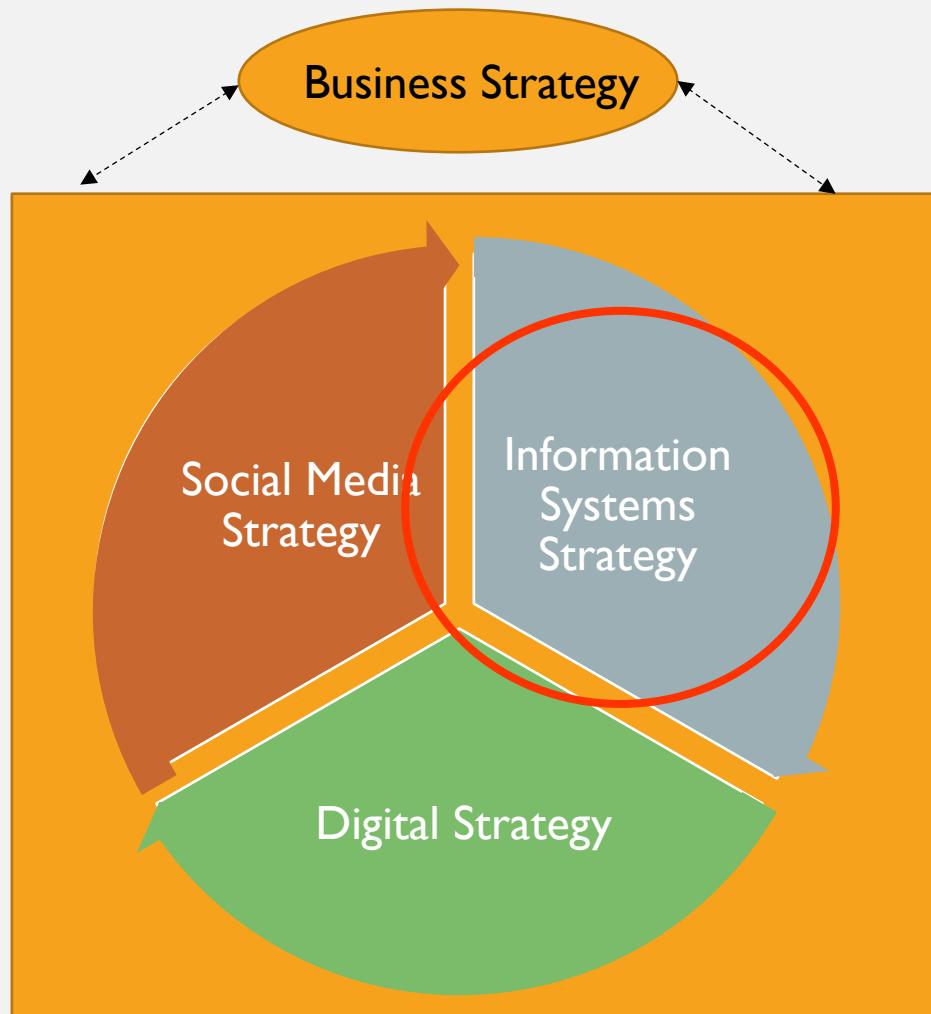
Customer independent
Customer dependent
Customer segment dependent
Customer location dependent
Real-time Market

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BUILDING INFORMATION SYSTEMS STRATEGIES

- Organisations view and develop technology strategies from many different perspectives depending on the need.
- To drive value from technology there is often an overarching Information Systems strategy with linkages to “sub-strategies”.
- Note that organisations develop strategies in many ways.
- In this course, we'll view Information Systems as an overarching strategy leading into Social Media and Digital Transformation.
- In practice, there's significant overlap however, it's useful to examine each individually so we understand the relevant components of each.
- This way, when combined, we make sure we haven't missed anything.





BUILDING THE INFORMATION SYSTEMS STRATEGY

- The Information System (IS) strategy broadly describes how the organisation will work with technology during the planning horizon.
- The horizon is the timeframe for the plan and is typically 18 months – 3 years.
- It needs to be realistic, clear and supported by projects, financial estimates and a business case aligned to the goals of the organisation.
- The strategy covers a number of different areas of technology and can reference back to the enterprise architecture (if one exists).
- The competition for limited capital and operating investments drives innovation and highlights those initiatives that deliver the most value to the organisation.

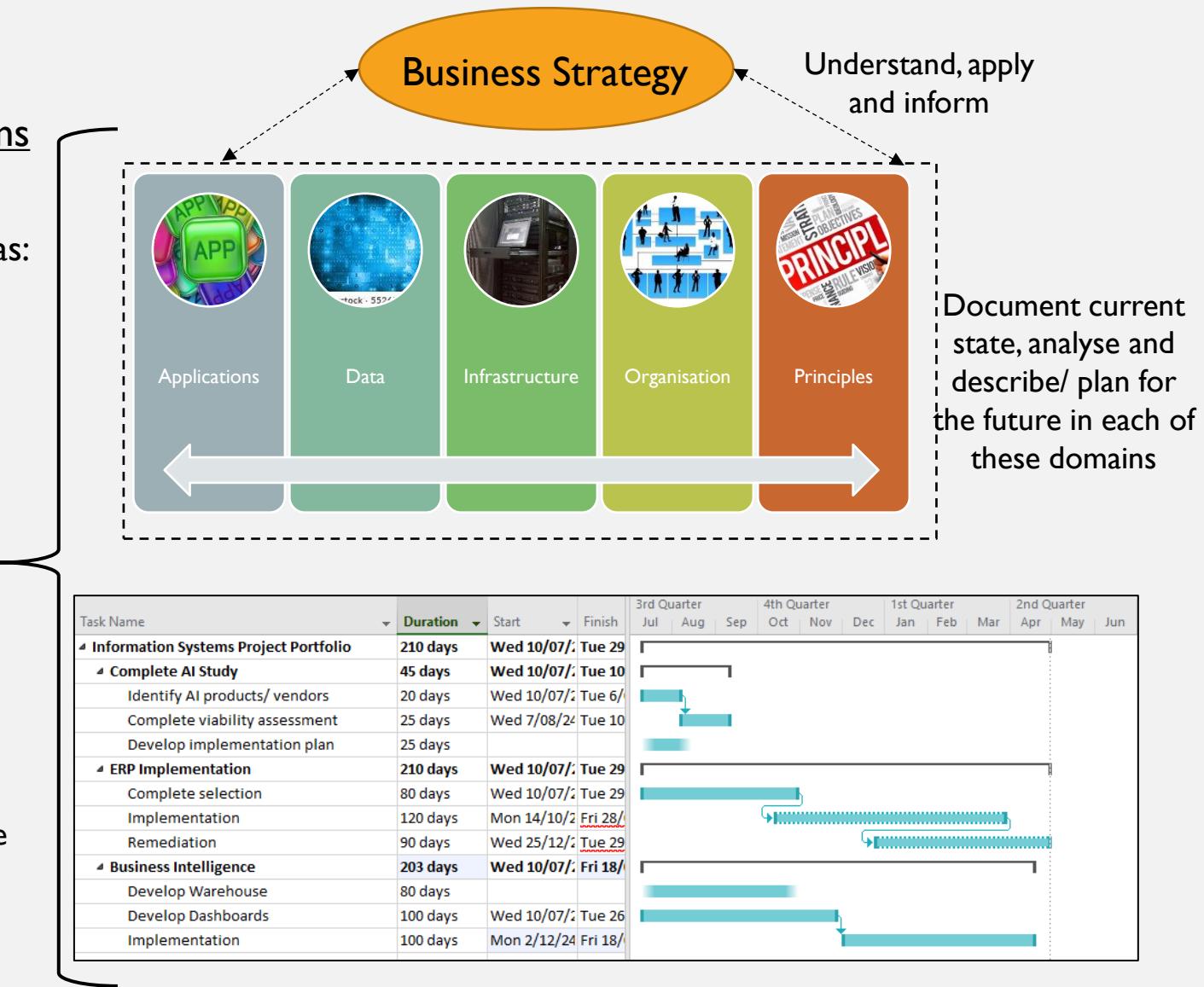
LEVERAGING THE BUSINESS STRATEGY TO BUILD THE INFORMATION SYSTEMS STRATEGY

The Information Systems Strategy

Consists of sections such as:

1. Rich Pictures
2. Architectures
3. Detailed Design
4. Work Plans
5. Org Change plans
6. Communication Plans
7. Business Case
8. And more

Describes the future state implementation approach and detailed work plan





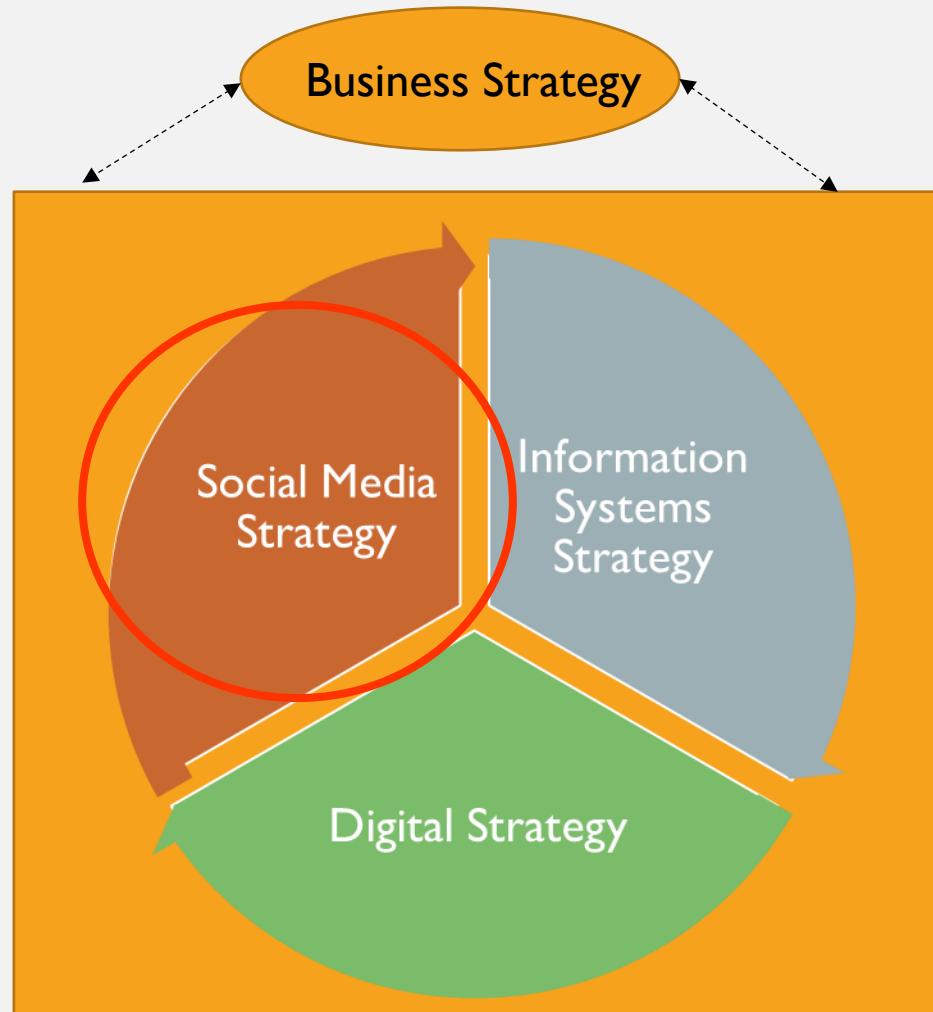
The Information Systems Strategy – what makes a good one?

- Alignment – clearly aligns with business strategy, key performance indicators and technology governance principles.
- Realistic –provides a realistic assessment of current capabilities and the ability of the organisation to absorb new technologies.
- Clarity – clearly explains the strategy in technical and non-technical terms.
- Organisational change – describes how organisational change will be managed by senior management and programs/projects.
- Time based – provides description of initiatives on a timeline throughout the planning horizon. Recognises that there are dependencies within the plan.
- Financially sound – provides realistic capital and operating budget estimates. Demonstrates business value and ROI.
- Innovation – incorporates appropriate innovation that clearly drives business transformation.
- Buy In - Likely to receive executive and senior management support in an environment where everyone is competing for capital.

STRATEGY DEVELOPMENT METHODS

BUILDING A SOCIAL MEDIA STRATEGY

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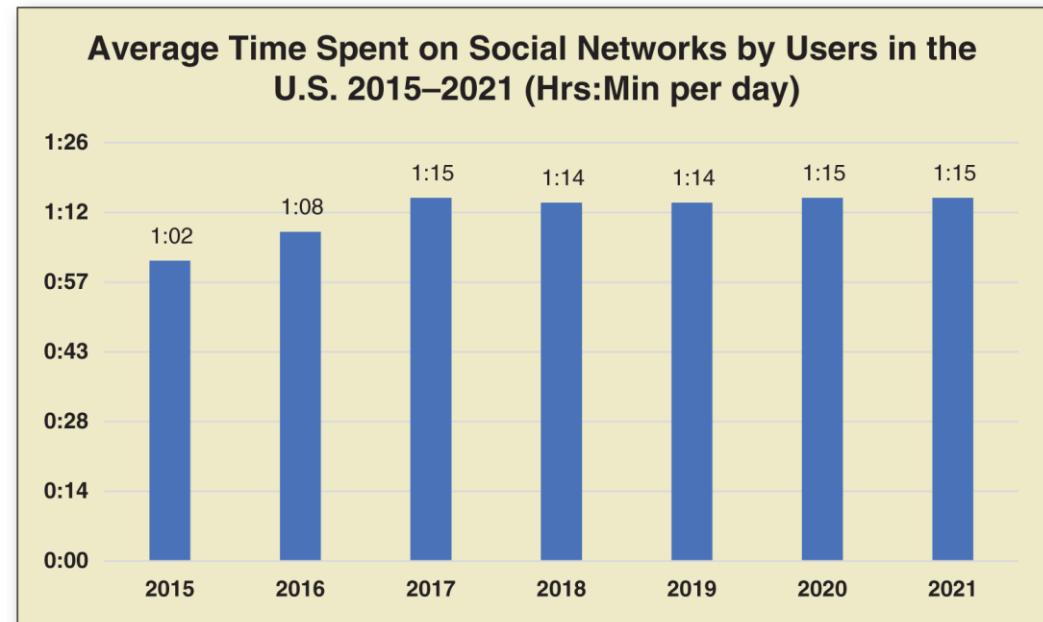


SOCIAL MEDIA STRATEGY

LEVERAGING SOCIAL MEDIA TO GROW THE BRAND AND BUSINESS



- Social Media helps us establish our personal brand as we post to friends, family, communities and, potentially, complete strangers
- Employers use Social Media to evaluate potential candidates and it should be assumed that the data you post on any site is going to be available forever.
- Social Media enables:
 - Collaboration
 - Customer Engagement
 - Image/Reputation Management
 - Employee Communication
 - Talent Acquisition
 - Productivity and Information Utilities
 - Fund Raising
- Leveraging Social Media to grow the business is a key part of Marketing and Digital Business Strategies.



WEB 2.0

THE SOCIAL WEB

“The original Web — Web 1.0 — provided a platform for technology-savvy developers and the businesses and organizations that hired them to publish information for the general public to view.”

Stair, Ralph M, and George Reynolds. *Principles of Information Systems*, Cengage, 2017. ProQuest Ebook Central

- Web 2.0 (*the social web*): a term used to describe a phase of World Wide Web evolution characterized by dynamic webpages, social media, mashup applications, broadband connectivity and user-generated content.
- Social media: a collection of Web applications, based on Web 2.0 technology and culture that allows people to connect and collaborate with others by creating and sharing digital content.
- Web 3.0 – the Metaverse plus more....

Web 1.0— The Early Web	Web 2.0— The Social Web
Static pages, HTML	Dynamic pages, XML, and Java
Author-controlled content	User-controlled content
Computers	Computers, cell phones, televisions, PDAs, game systems, car dashboards
Users view content	Users create content
Individual users	User communities
Marketing goal: <i>influence</i>	Marketing goal: <i>relationships</i>
Data: single source	Data: multiple sources, for example, mashups

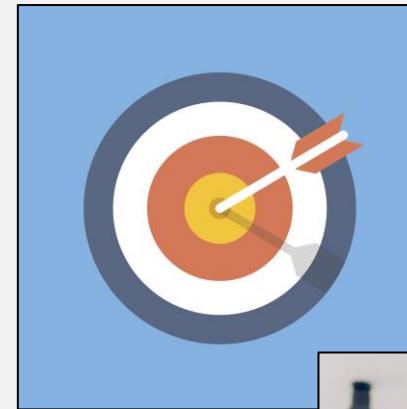


BUILDING A SOCIAL MEDIA STRATEGY – WHERE TO START?

- Successfully creating a positive and profitable presence on Social Media requires careful thought and a well designed plan.
- Random tweets, videos and posts might work but risky
- In business strategy we're trying to realise opportunities and solve problems – the same is true in Social Media
- For example:
 1. I need to grow my retail revenue and profit. How can I target existing and prospective customers to buy high margin or high volume products?
 2. My manufacturing business is growing and I now have multiple locations so my employees are in many geographic locations. How can I keep everyone energised, focused and productive?
 3. My main competitor just launched a very professional looking web site but that's their only online presence. The market views my products are viewed as better quality but my business doesn't have a lot of capital right now. What can I do to remain competitive?

Class Discussion

Pick one of these challenges and be prepared to describe how you might use Social Media to benefit the business – be specific



SOCIAL MEDIA STRATEGIES – WHO DO YOU WANT TO BE?

An organisation's social media strategy can't be static and changes based on business needs, market conditions and many other factors.

We can identify four social media strategies that provide an organisation with both a starting point and direction.

The Creative Experimenter – uses **small scale tests** to gather information and fine tune aspects of their business.

The Predictive Practitioner – focuses on a **specific area** of their business, and, maybe stakeholders, with the intent of minimising risk and enabling **close monitoring** of results.

The Social Media Champion – large scale social media initiatives launched to hopefully achieve **positive and predicted** results

The Social Media Transformer – uses large scale interaction, to enable contribution and collaboration from across the company and **allows the unexpected** to improve aspects of their business

Class Discussion -

- Match the Social Media Strategy to the most appropriate Case

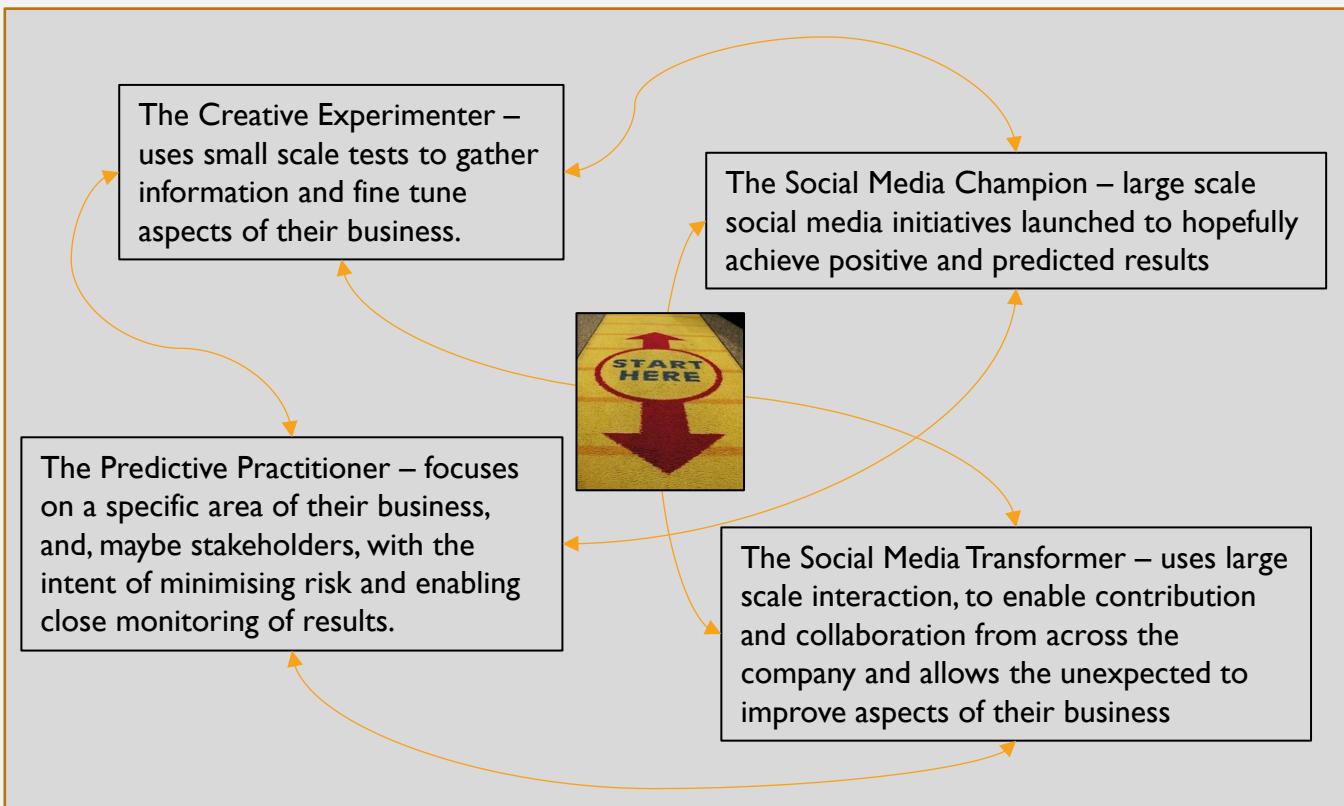
Clorox – created a website that poses questions to customers and suppliers with the intent of gathering feedback and suggestions.

Ford – lends 100 cars to social media influencers and others and requires them to post regular content on themed, planned missions

Cisco – launches a workforce experience that operates like a Facebook wall. Real time news feed, communities, video, collaboration tools, etc.

EMC – launched a platform to see whether their employees could help reduce reliance on contractors. Conducted behind their firewall and made it clear that they'd run for 2 months and then try something else.

SOCIAL MEDIA STRATEGIES – EVOLUTION AND GROWTH

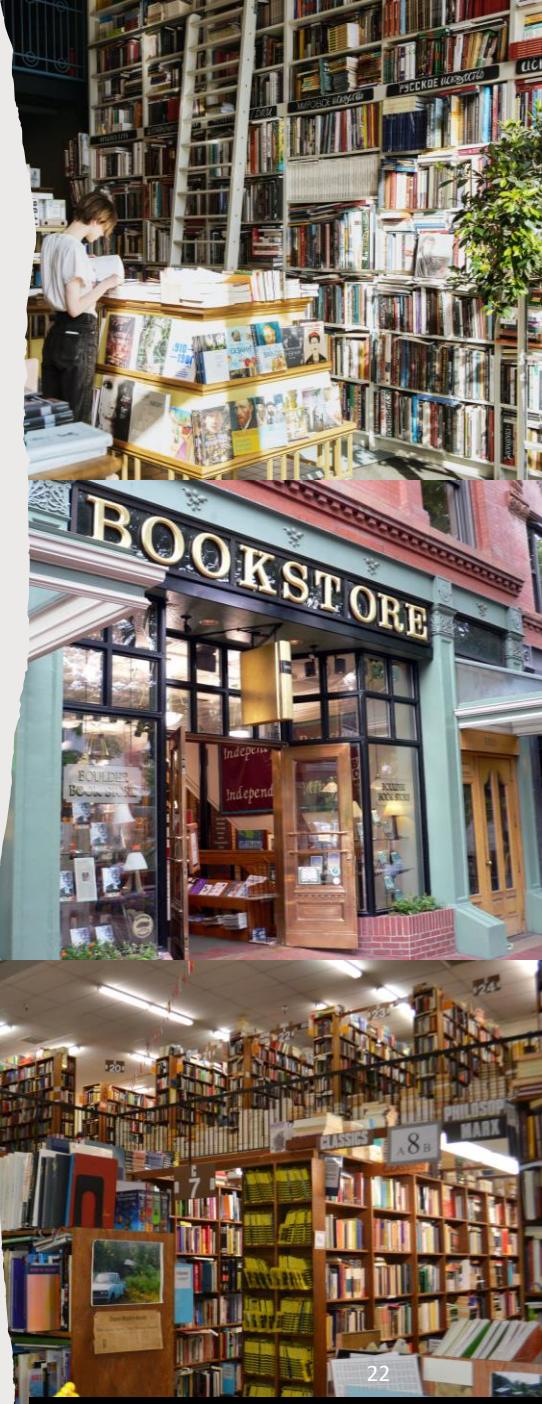


Class Discussion

- If were the VC of ANU and wanted to establish/expand your social media presence.
- Where should you start with social media? Which strategy works best? What do you see as the progression as the business grows, potentially exponentially?

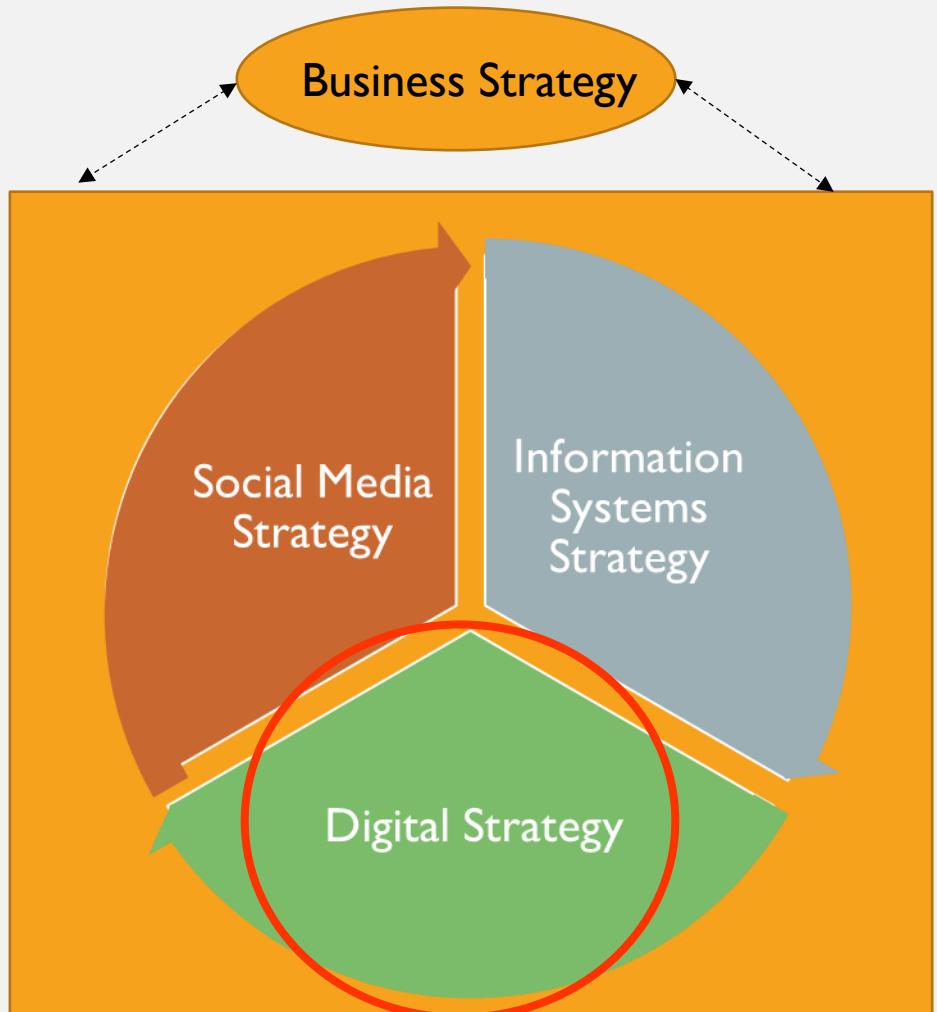
IN CLASS EXERCISE – 20 MINUTES

- Imagine you are the owner of a successful bookstore in Sydney.
- You have a good relationship with the local community and a loyal group of customers who come into the store regularly to buy books and have a coffee.
- The store has an impressive collection of murder mystery books, and this has been an area that you really enjoy exploring.
- Revenue is declining and expenses such as rent is increasing which is putting a lot of pressure on the business.
- You have decided that leveraging social media to reach more people might be a good way to increase sales either in person or via the new web site that you are building.
- Think about how you might approach social media.
 - I. Use some of the strategies that we have discussed to decide the best way forward. What's the best strategy to drive additional revenue?
 2. What channels make the most sense for the book shop?
 3. How will you measure the success of your social media strategy?



DIGITAL STRATEGY

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DIGITAL BUSINESS STRATEGY

Key External Trends

- Pervasive Connectivity
- Big Data Analytics
- Global Supply Chains
- Lower ICT costs
- Pay as you go ICT

Key organizational shifts

- Limitations of Traditional Business Models
- Trans-functional role of ICT
- New Mandate for IT and CIO
- Increased familiarity of ICT

Input

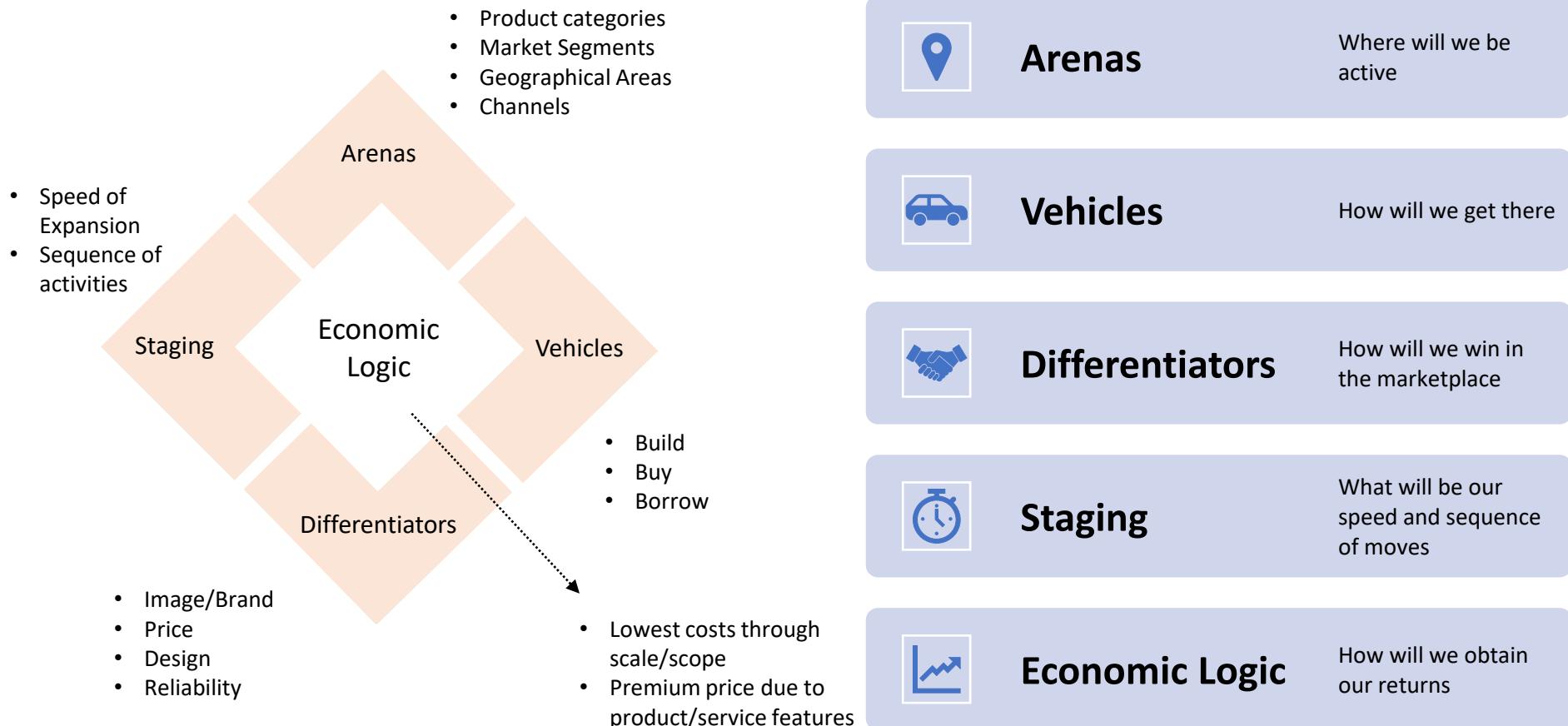
- **What's the scope of the strategy?**
- **How will this change our product/service offerings?**
- **How are we creating/realising value and for whom?**
- **What will differentiate us from our competition?**
- **How can we reach target stakeholders?**
- **How quickly can we realistically implement our strategy?**

Processing

Performance
(Economic Logic)

Output

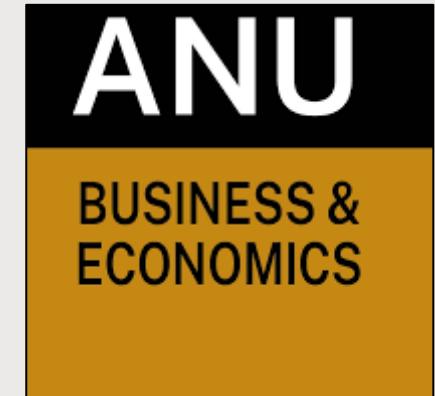
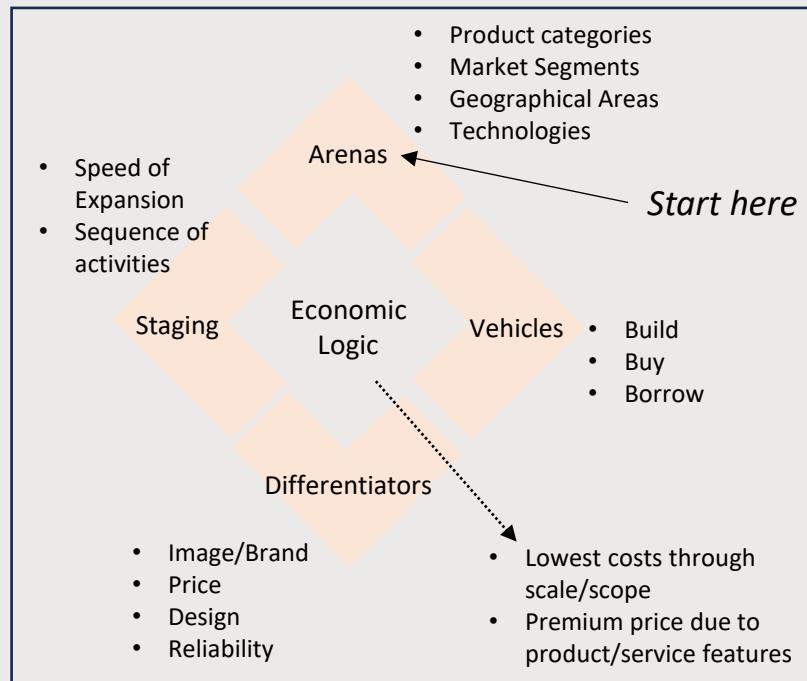
Developing the Digital Transformation Strategy, The Strategy Diamond



Source: Donald C. Hambrick and James W. Fredrickson: Are you sure you have a strategy? Academy of Management Executive, 19(4), 2005.

IN CLASS EXERCISE – 20 MINUTES

- Imagine you are the newly appointed Vice Chancellor of ANU.
- As a prestigious institution you believe that the organization needs a digital transformation strategy to support growth in terms of market access, research, revenue, course offerings, etc.
- However, you know that this is already a very competitive area of the education industry, so you feel that you really need to get it right. You need to become a presence in the digital world and therefore need to transform your business.
- Provide some advice to the Vice Chancellor by completing two activities
 1. Develop a SWOT analysis for the ANU
 2. Draft a digital strategy by using the Strategic Diamond framework.
- Work in small groups and be prepared to share your work with the class.



THE BUSINESS INFORMATION SYSTEMS ECOSYSTEM

COURSE STRUCTURE

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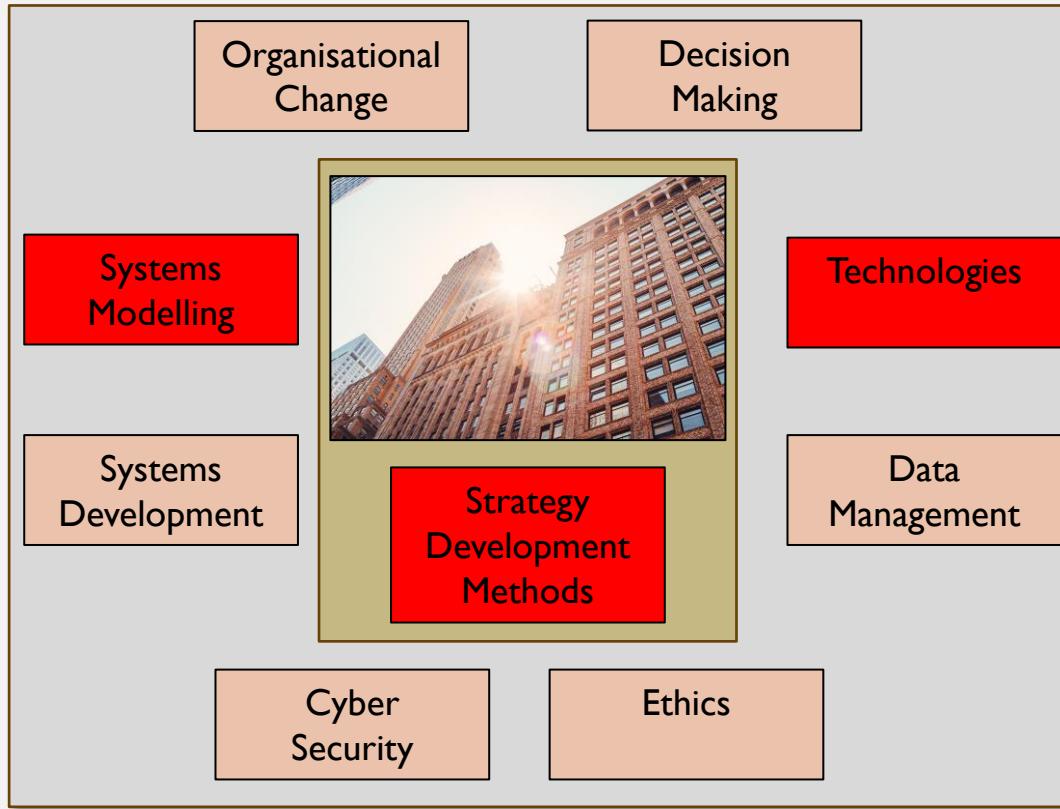
Markets



Customers



Suppliers



Government



Disruptive Tech

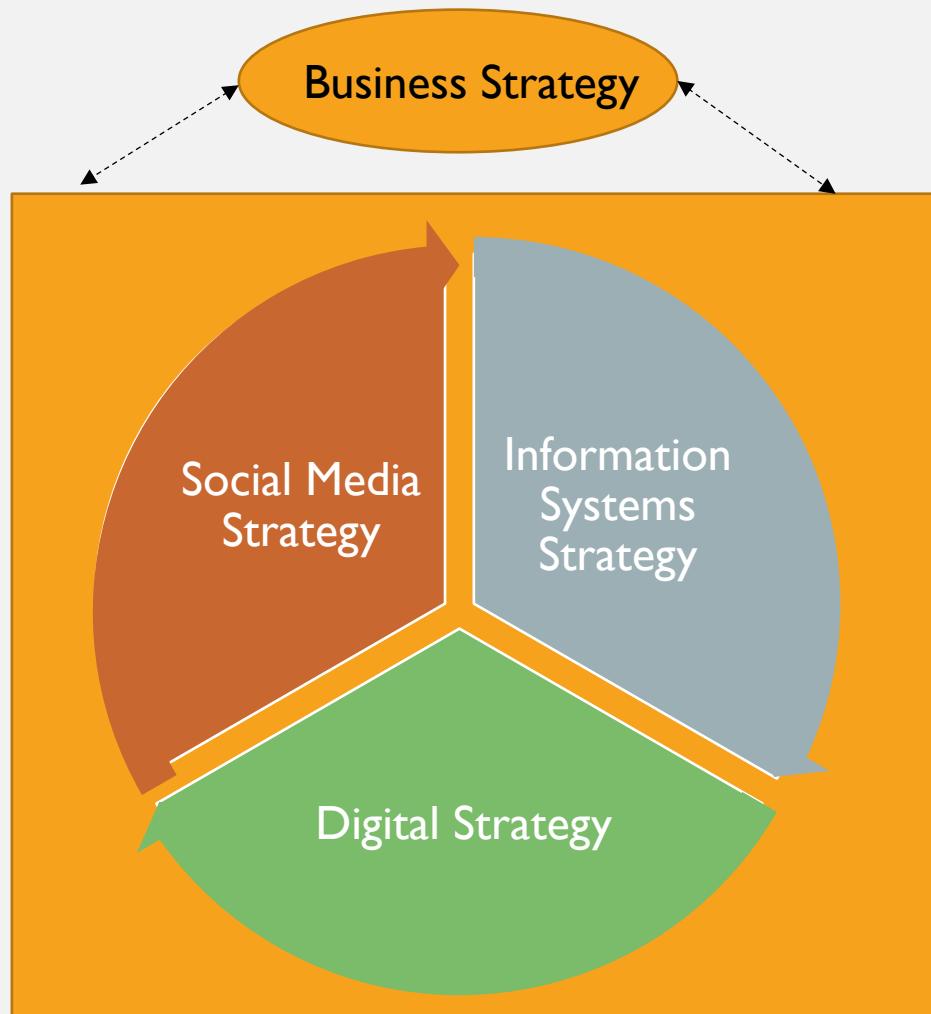


Competitors

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.

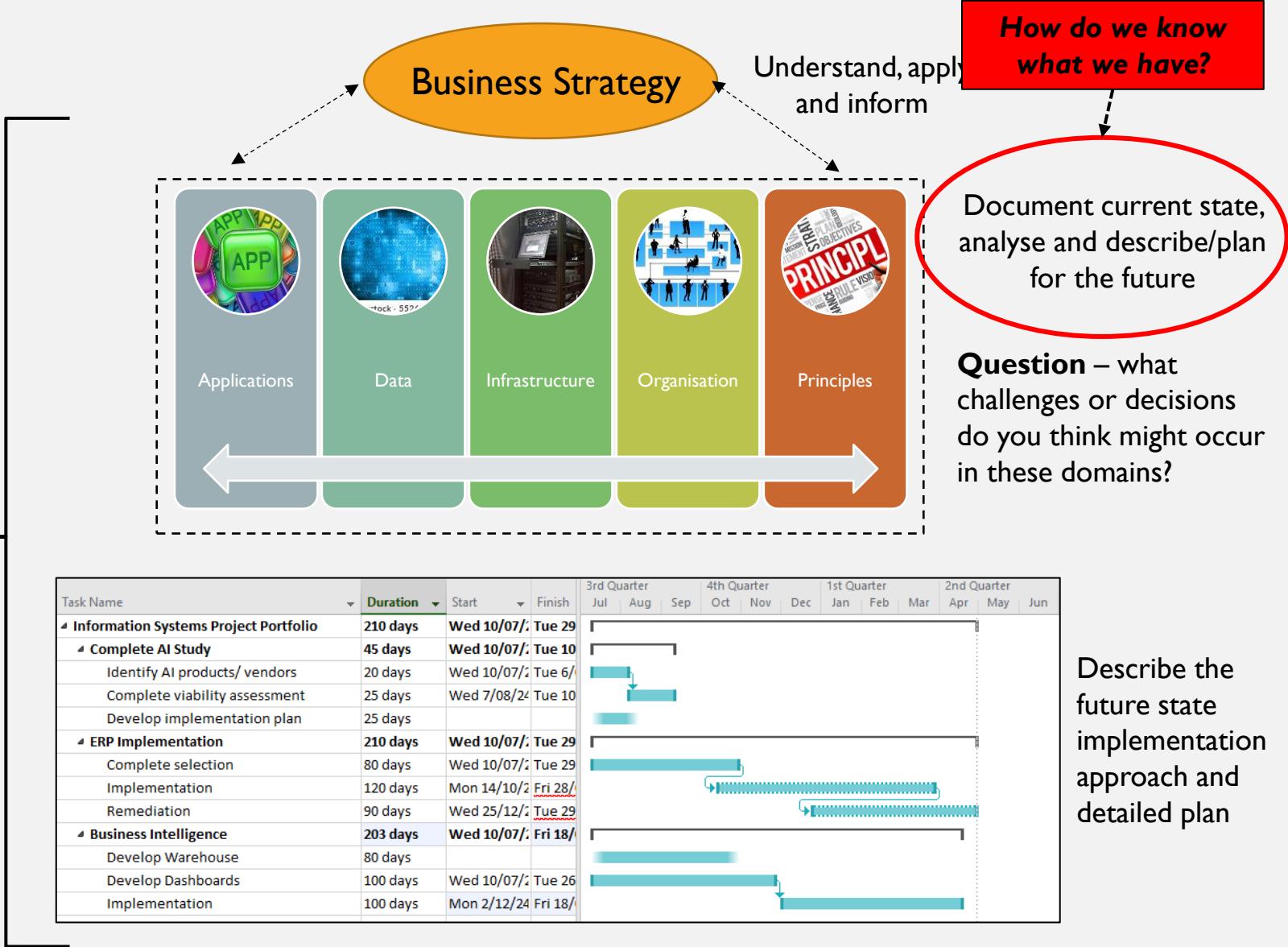
BUILDING INFORMATION SYSTEMS STRATEGIES

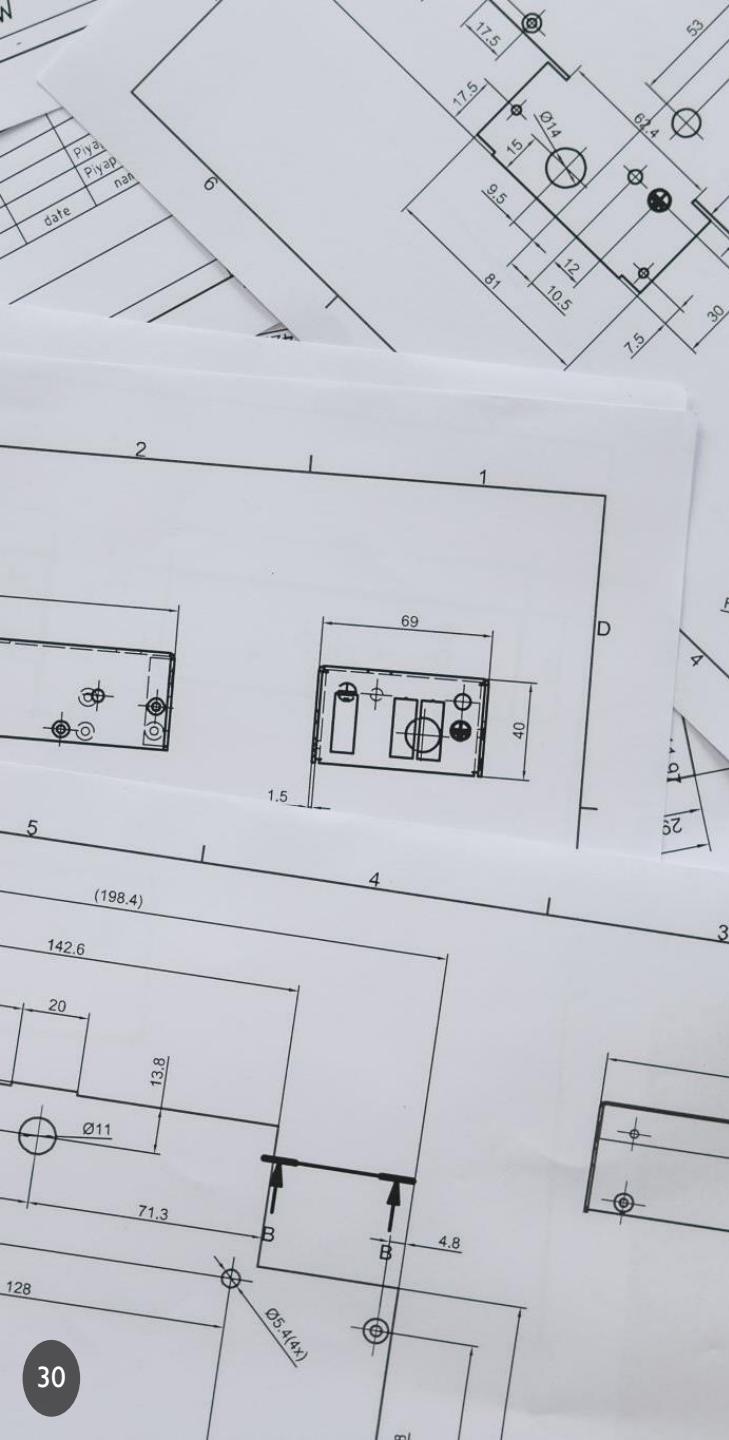
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BUILDING THE INFORMATION SYSTEMS STRATEGY

Information Systems Strategy



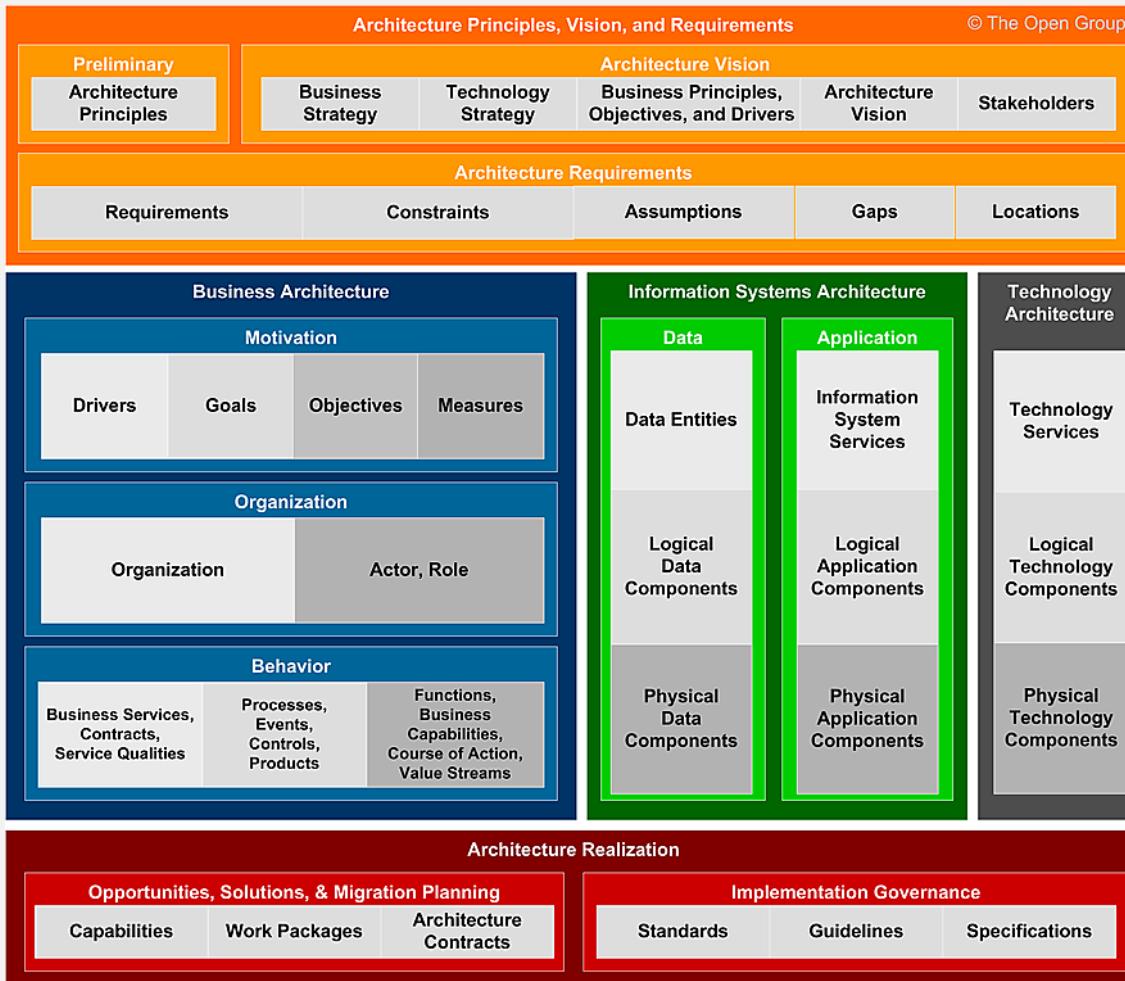


HOW DO WE KNOW WHAT TECHNOLOGY WE CURRENTLY HAVE?

INTRODUCING THE ENTERPRISE ARCHITECTURE

- We've talked about how we can use systems modelling to describe how technology fits into our operating environment.
- When businesses need to **have a holistic view of their technology** to help them manage technology, they often turn to an Enterprise Architecture (EA).
- **The EA provides a detailed description (blueprint) of the physical, information, process and governance architectures that supports an organisations use of technology.**
- The Enterprise Architecture becomes an inventory of an organisations technology and **describes the connection between technology and key elements of the business.**
- In industry, the EA concept has evolved over time and, with the development and expanded use of technology, is a critical factor in an organisations successful use of technology.
- There are many different representations of an EA. Some are viewed as standards within the IT industry and others are industry or sometimes organisation specific.
- There are several EA frameworks that are popular and often used in industry. **Most of the time, an organisation will start with an EA framework and then customise it to suit their environment.**
- We are going to focus on The Open Group Architecture Framework (TOGAF). This framework is commonly used in industry and often seen in government organisations.

INTRODUCING THE ENTERPRISE ARCHITECTURE



- TOGAF comes from The Open Group
- It was developed in the 1990s when competing software vendors realised that inconsistent changes in technical standards on which their products were built was reducing their competitiveness.
- This was a real concern in the 1990s because Microsoft began to expand beyond the PC market.
- Now, the Open Group is a consortium of over 800 organisations including technology vendors, industry groups and government organisations.
- TOGAF consists of 5 interconnected domains.

The Open Group, <https://pubs.opengroup.org/architecture/togaf92-doc/arch/>

TOGAF – FRAMEWORK DOMAINS

- **The TOGAF consists of 5 domains.**
- Within each domain there are many, many artefacts that describe the content of the domain. These artefacts can be documents, models, technical specifications, etc.
- TOGAF also comes with a methodology for the development of an EA; ongoing management of the framework and a way to assess the maturity of your organisation i.e. how well have you developed and implemented your EA.

Architecture Principles, Vision, and Requirements	A succinct description of the Target Architecture that describes its business value and the changes to the enterprise that will result from its successful deployment. This is “what” we want our enterprise architecture to look like.
Business Architecture	A representation of holistic, multi-dimensional business views of: capabilities, end-to-end value delivery, information, and organizational structure; and the relationships among these business views and strategies, products, policies, initiatives, and stakeholders.
Information Systems Architecture	Describes how the enterprise's Information Systems Architecture enables the Business Architecture and the Architecture Vision, in a way that addresses stakeholder concerns.
Technology Architecture	Develop the Target Technology Architecture that enables the Architecture Vision, target business, data, and application building blocks to be delivered through technology components and technology services,
Architecture Realization	Describe the approach that will optimise the realisation of the desired Target Architecture. This describes how we will get to our target architecture.

THE BENEFITS OF ENTERPRISE ARCHITECTURE

The successful design, implementation and ongoing management of an EA can create strategic and operational benefits.



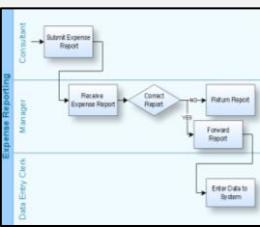
THE MYTHS OF ENTERPRISE ARCHITECTURE

(IT'S NOT A SILVER BULLET)

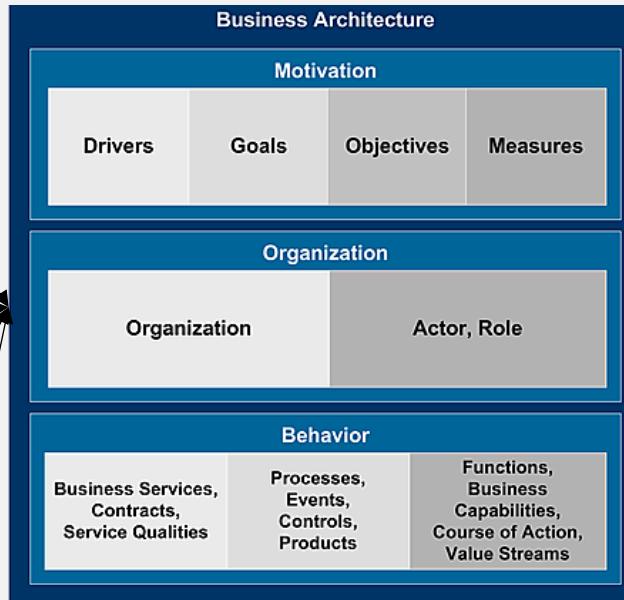
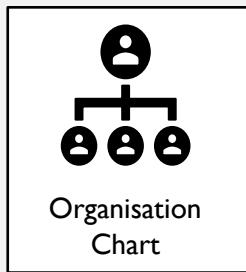
We understand the structure of an EA framework and potential for value but realising the benefits requires us to dispel some myths:

- Myth 1: EA creates value
 - The EA is a collection of artefacts that **delivers no value without action being taken**.
 - **Management needs to be committed** to implementing and following the EA principles .
- Myth 2: EA reduces complexity
 - Using an EA is actually a way of dealing with a complex environment that is likely to stay that way.
 - The **complexity of the EA** is a reflection of the complexity of the environment it describes
- Myth 3: EA evaluates all aspects of an enterprise
 - In theory, an **EA should describe all of the business and technology** components of an organisations strategy and operations.
 - However, given the changing nature of organisations this **isn't practical nor feasible**.
 - The level of effort required to describe the minutiae of the EA domains undercuts the value of EA implementation
- Myth 4: EA should only capture the situation envisioned
 - While the EA is a strategic framework it **must have an “as-is” and “to-be”**.
 - Enables decision makers to take action on current technology and plan for the implementation or removal of other domain artefacts over time.
- Myth 5: EA is a one-time effort
 - **Business conditions and technology are constantly changing** and consequently the EA must be updated in order to stay current and provide an accurate depiction of the architecture(s)

CONNECTING THE BUSINESS ARCHITECTURE WITH TECHNOLOGY



Process Models



- In business architecture, we describe business operations and how we measure the performance of the business.
- We also build a picture of the people and assets that exist in our organisation. These are called Actors.
- We can link elements of the Business Architecture to other EA domains to examine how well technology is supporting our organisation.

Information Systems Architecture



- We should see a connection between business and the applications and data that we use.
- If there isn't a connection or there's only poor support then we aren't getting the most out of our technology.

Technology Architecture

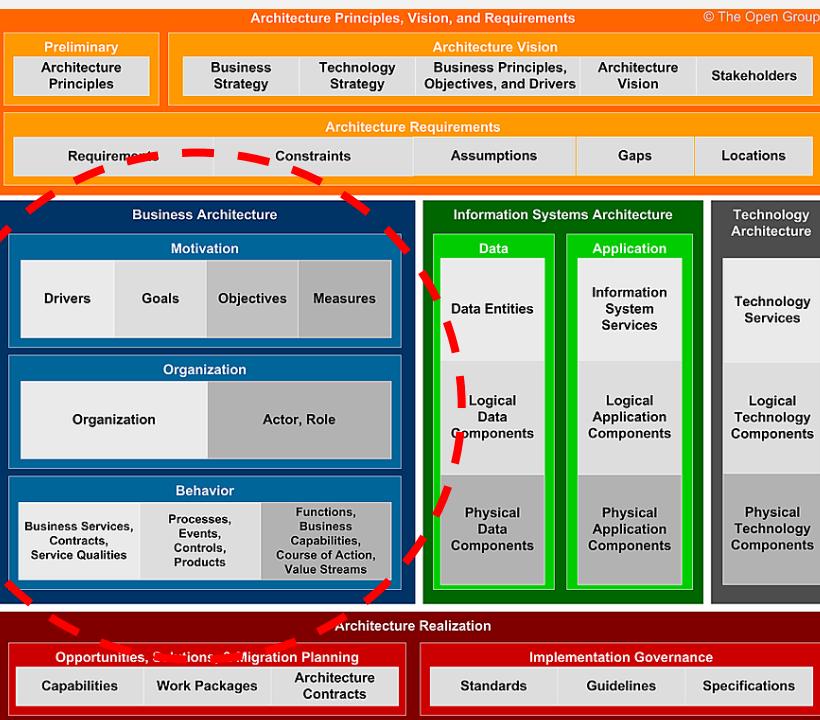
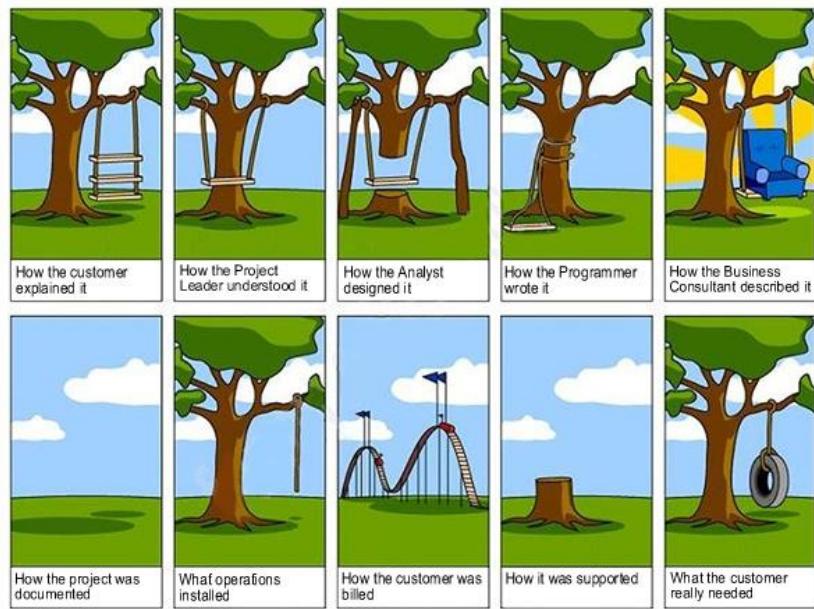
- Similarly we should be able to see how our infrastructure (servers, network, workstations, etc) support the IS Architecture and the Business Architecture.

Architecture Principles, Vision, and Requirements

- Our business architecture and related domains need to be governed effectively to ensure ongoing support

DOCUMENTING THE BUSINESS ARCHITECTURE

- The Business Architecture (BA) consists of many business and technical artefacts including process models, actors, role definitions, measures, etc.
- It provides insight into how the business operates and the linkages to the organisation's technology that illustrate how the technology supports the business.
- Accurately documenting a business architecture requires the participation of business users who have a thorough knowledge of how the business operates.
- There are many ways to document business processes and requirements however, too often, there is a misalignment of definitions, IT understanding and end user expectations.
- Consequently, the IT and business teams must recognise that BA development is an iterative and potentially long term effort in order to ensure accurate documentation.
- Frequently, insufficient representation and participation from the business areas leads to inaccuracy, confusion and conflict.



THE BUSINESS ARCHITECTURE

DEFINING AND UNDERSTANDING INFORMATION SYSTEM REQUIREMENTS

Functional Requirements

- End User Transactions
- Business Rules
- Administrative functions
- Authentication
- Authorization levels
- Audit Tracking
- External Interfaces
- Certification Requirements
- Reporting Requirements
- Historical Data
- Legal or Regulatory Requirements

Non-Functional Requirements

- Performance (e.g. Response Time, Throughput, etc)
- Scalability
- Capacity
- Availability
- Reliability
- Recoverability
- Maintainability
- Serviceability
- Security
- Regulatory
- Manageability
- Environmental
- Data Integrity
- Usability
- Interoperability

- Understanding requirement types and making sure they are all considered is important!
- This is a good subject for the conversation with your IT person.

IN CLASS EXERCISE

BUILDING MY PERSONAL ENTERPRISE ARCHITECTURE (20 MINUTES)

In this exercise, work in small groups to build your (collective) enterprise architecture. Use the EA domains as listed below and use the questions as guidance for your discussion and analysis. When you get to the vision question, be creative and remember that you are describing the future as you would like it to be.

Architecture Principles, Vision and Requirements

- Will my personal needs change over the next 2 -3 years?
- How do I want my technology to change over this time period?
- Should I decide to keep or change the tech that I have?
- What constraints do I need to live with?

Business Architecture

- What daily processes does the tech support?
- Who is using the technology?
- What is driving the use of this technology?

Information Systems Architecture

- What personal information is stored and used by the tech?
- What are my most commonly used applications?

Technology Architecture

- What types of devices do I use?
- What kind of networks do I access?
- Where is my information stored?

Architecture Principles, Vision and Requirements

- What do I need to do to achieve my vision of how I will use tech over the next 2 – 3 years?
- What is the first thing that I need to do?
- Do I have a plan that is realistic?

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.



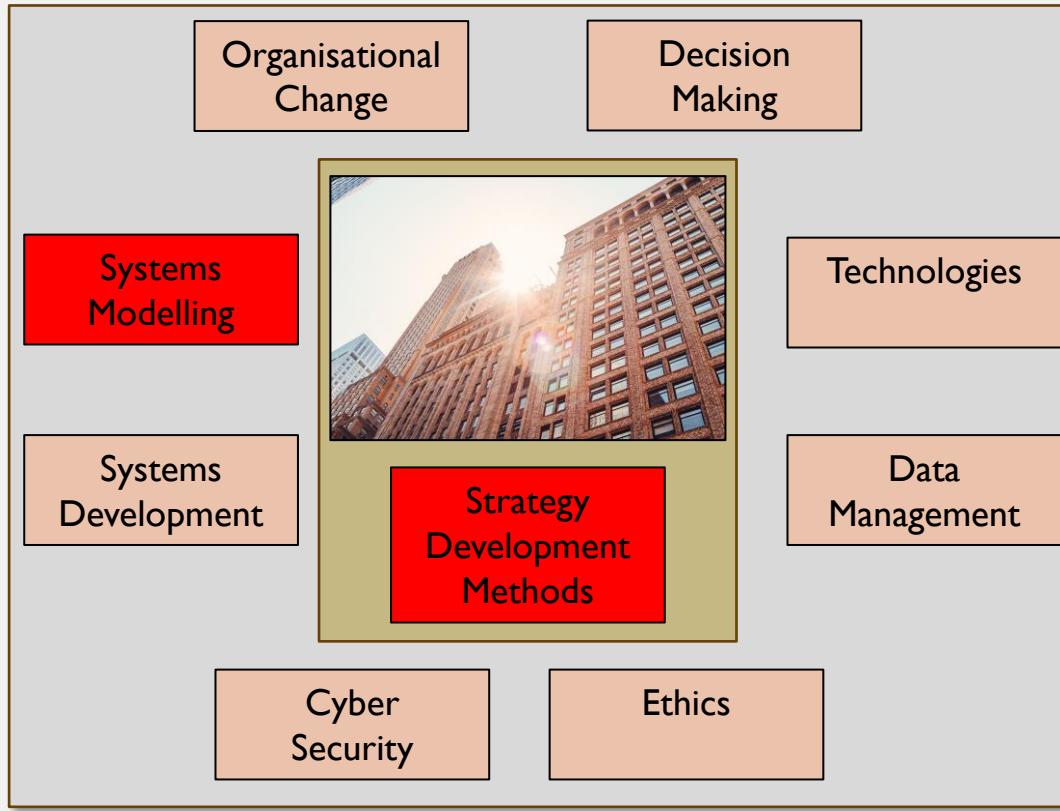
Markets



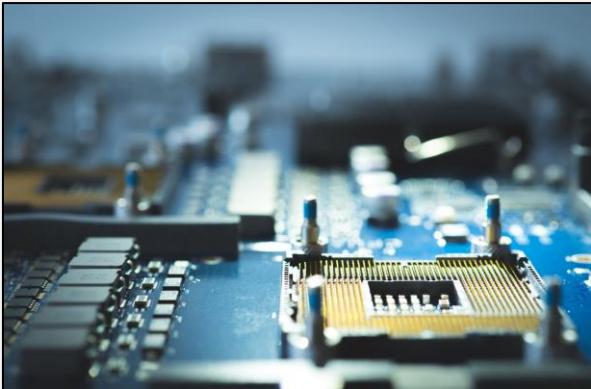
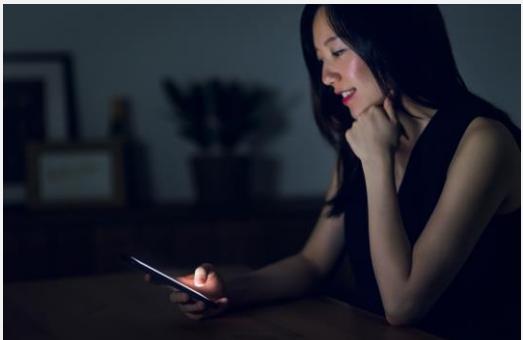
Customers



Suppliers



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.



Moving into a Digital World

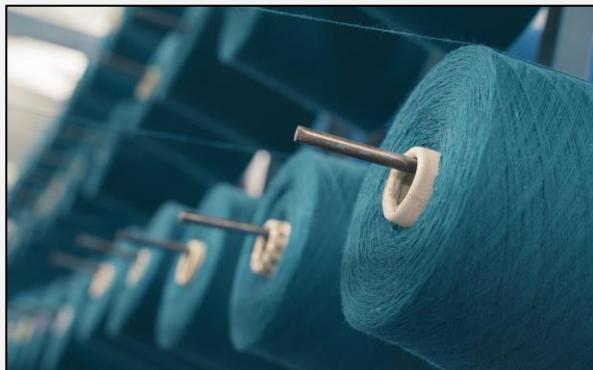
Digital transformation of an industry

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?

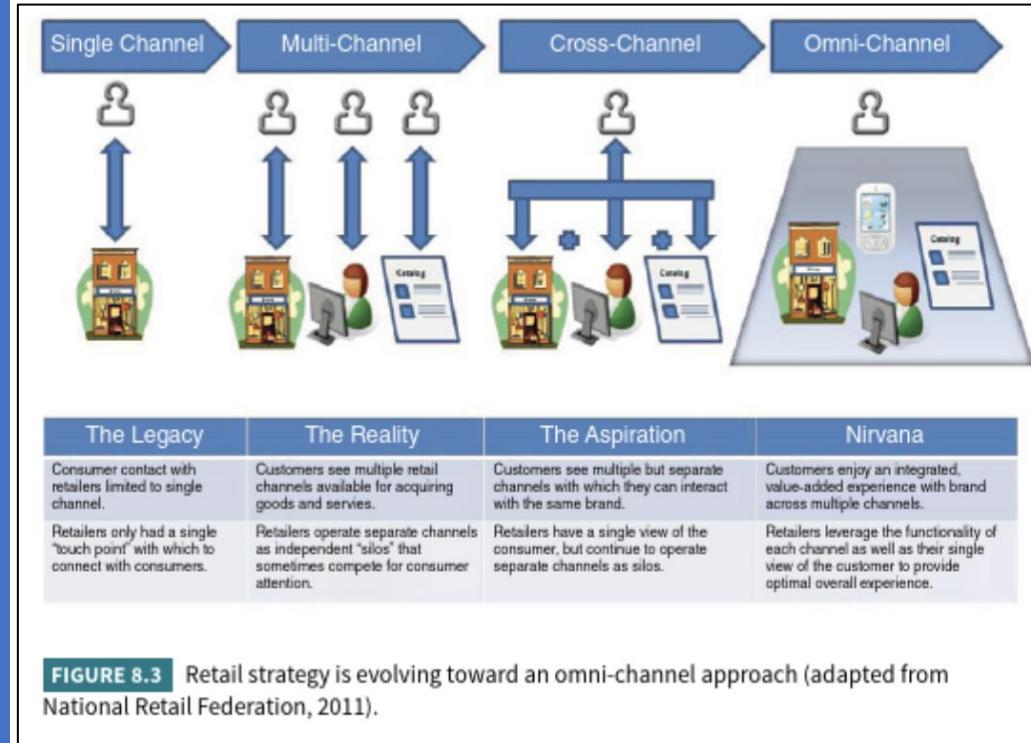
Understanding e-Commerce consumer behaviours

- 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?





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

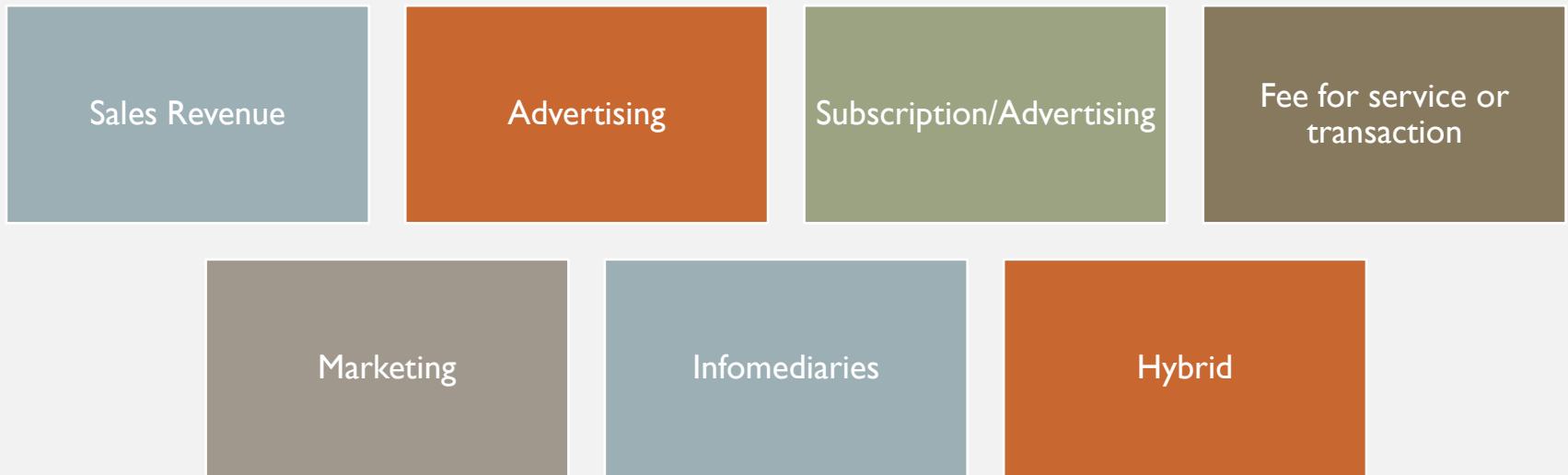
We can classify e-Commerce by thinking about bi-directional transactions between two or more actors.

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



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

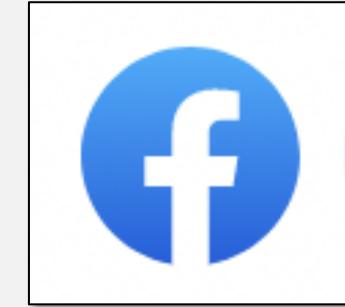
- The Sales Revenue model is the most obvious and familiar to most e-Commerce consumers
- Uses e-commerce to support sales activities by providing access to product/services via catalogue or other format.
- Includes provision of digital content such as video, music, images, etc
- Can be challenging for 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.



A screenshot of the New York Times website homepage. At the top, it displays the date "Saturday, August 5, 2023" and the section "Today's Paper". Below this is a navigation bar with links to "World", "U.S.", "Politics", "N.Y.", "Business", "Opinion", "Science", "Health", "Sports", "Arts", "Books", "Style", "Food", "Travel", "Magazine", and "Real Estate". The main article headline is "Clarence Thomas's \$267,230 R.V. and the Friend Who Financed It". A thumbnail image shows a man in a striped shirt smiling. Below the article are links to "Trump Investigations", "Trump's Legal Team Is Enmeshed in a Tangle of Possible Conflicts", and "Former President Trump's cast of lawyers is marked by a web of overlapping interests". There are also two small portrait photos of men.

A screenshot of the Netflix website homepage. The top features the Netflix logo and a banner with the text "Unlimited movies, TV shows and more". Below this, there is promotional content for various shows like "Kings in the Land", "EXTRACTION", and "THE WITCHER". A call-to-action button says "Get started >". At the bottom, there is a form for users to enter their email address to start a membership.

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.

Google



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

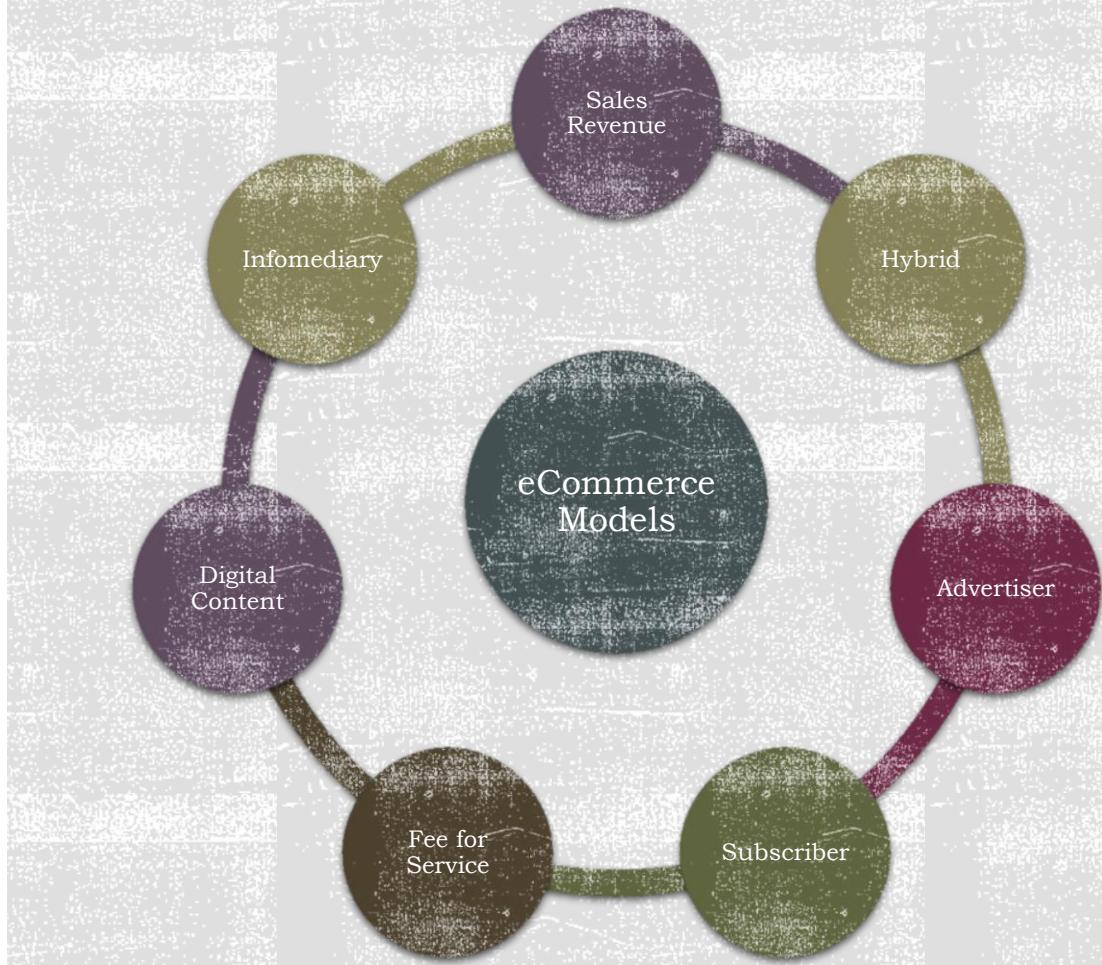
Reliable infrastructure

Payment systems and exchange rates

Governance of ecommerce systems

- Imagine you are consulting to the CEO of a mid size retailer and the year is 2010.
- The company has 5 retail stores in Melbourne and Sydney but very little online presence.
- The Internet is still growing exponentially and there's an opportunity to expand through e-commerce.
- Or maybe its just what they need to do to survive.
- Explain the e-commerce models so that the CEO can understand the options.
- Give some examples of each model.
- Which model are you going to recommend?
- What factors are influencing your recommendation?

E-COMMERCE MODELS (IN CLASS EXERCISE 20 MINUTES)



THE BUSINESS INFORMATION SYSTEMS ECOSYSTEM

COURSE STRUCTURE

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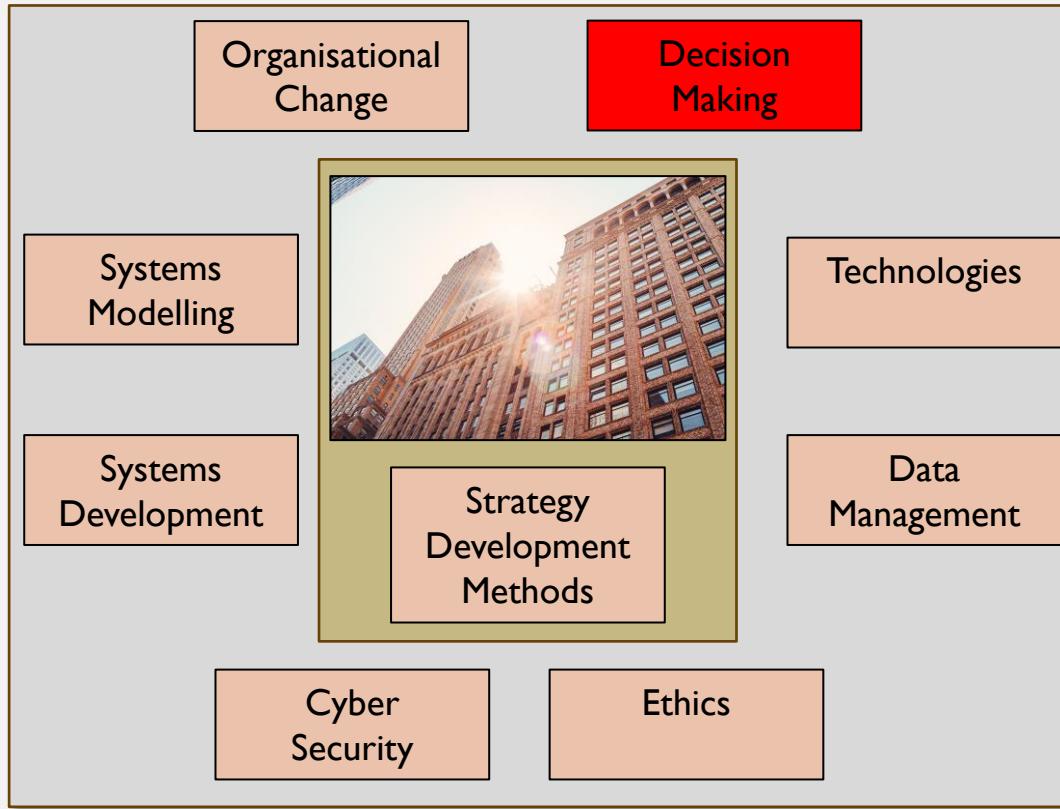
Markets



Customers



Suppliers



Government



Disruptive Tech



Competitors

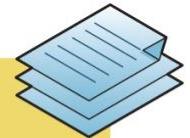
The course focuses primarily on the areas of investigation listed above. By the end of the course, you should have at least an introductory level understanding of each of these areas.

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.



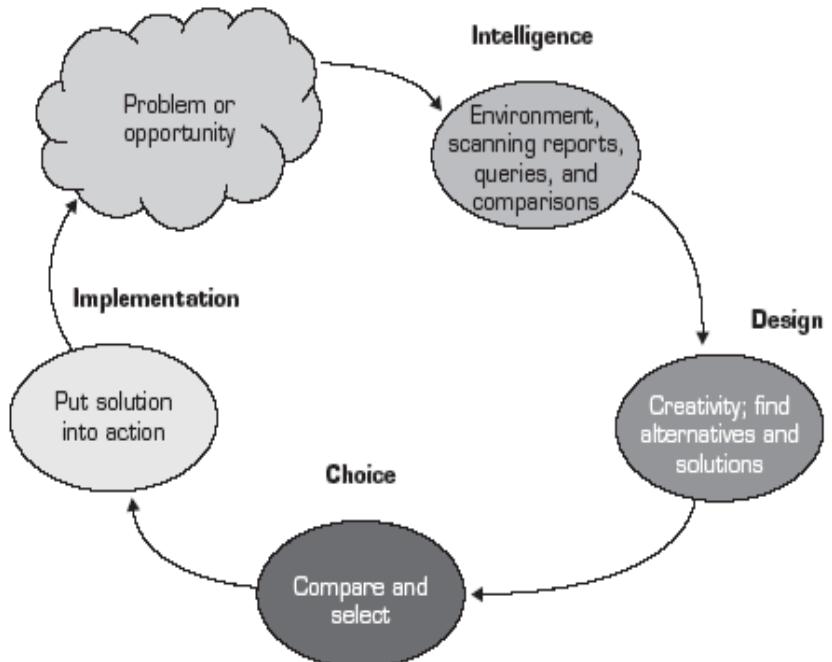
When we work in an Information Economy, we need to consider the availability and cost benefit of acquiring the knowledge needed to make a timely decision.



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





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

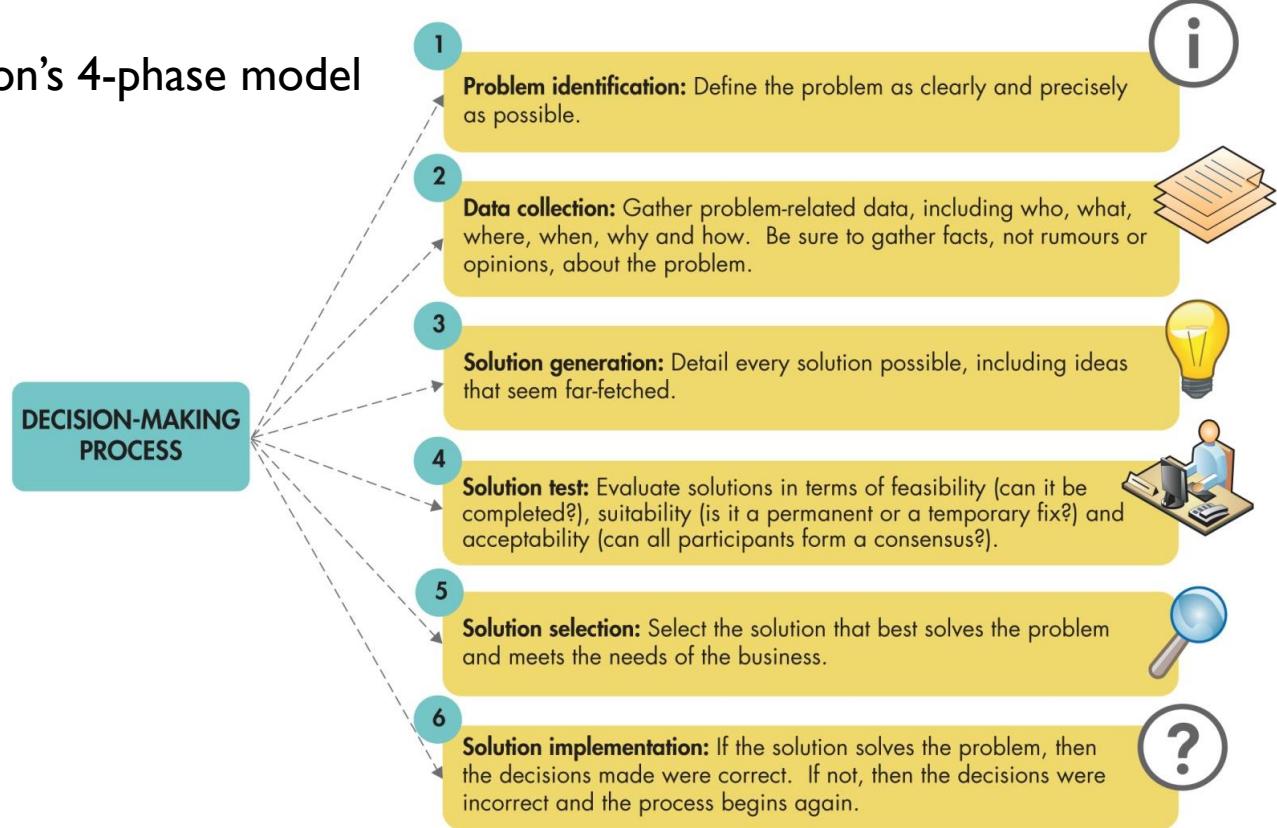
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Stages of Decision Making

THE DECISION-MAKING PROCESS

Expanded version of Simon's 4-phase model

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



What are Heuristics ?

Heuristic Techniques

Are ways to approach solving a problem

Mental shortcuts in thinking process of problem solving

Solutions are not expected to be 'perfect'

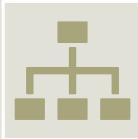
Aid to creative thinking when overcoming a problem

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

- 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?

DECISION-MAKING – STRUCTURED (PROGRAMMED) AND UNSTRUCTURED



Structured decisions (programmed)

occur in situations where established processes offer potential solutions, generally computed.

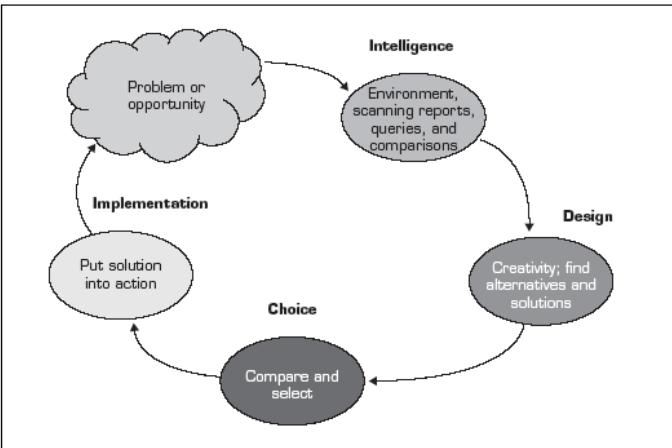


Semistructured decisions

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.



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.

WEEK 3 – WRAP UP

- In Week 3, we covered the following:
 - ✓ Enterprise Architecture
 - ✓ e-Commerce Classifications and Business Models
 - ✓ Decision Making
- Make sure you are focusing on both parts of the BAR Assessment (Report and Oral Review)
- Quiz in Week 6
- See you next week!