

# **business information systems (INFS1001)**

## **seminar - week 2**

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Week 1 Review

Rich Picture

IS Strategy

Social Media Strategy

Digital Strategy

Week 2 wrap-up



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- Describe the General Systems Model.
- Where's the value in the Business Model Canvas?
- Have you started your BAR research? If you are not on the spreadsheet you must let me know ASAP!!

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- We are accustomed to communicating through written and spoken word.
- Using pictures and graphics provides a different approach and encourages collaboration.
- The Rich Picture is useful because:
  - It helps people to visualize and discuss their own role in the organization
  - It can be used to define the aspects of the organization which are intended to be covered by the information system
  - It can be used to show up the worries of individuals, potential conflicts, and political issues
  - Lack of space on the paper forces decisions on what is really important



Berg, T., & Pooley, R. (2012). Rich Pictures: Collaborative Communication Through Icons. *Systemic Practice and Action Research*, 26(4), 361–376.

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## To develop a Rich Picture, you can answer the following questions:

- What is the system that you are trying to model?
- 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?
- How does information flow across the system?

FYI - The Rich Picture is a good way of communicating to an executive how proposed technology will work within their environment.

- The rich picture is a pictorial model providing a description of the information systems environment.
- The rich picture describes the elements of a system at varying levels of detail depending on the intended use and audience.
- In the example below, this Rich Picture describes the information systems environment supporting a bus company.
- Note that from this model we identify the major actors (customers, ticket manager, receptionist, competitor, etc), their technology (email, online payments, ticketing system, etc) and the information flow (passenger details, ticket inventory, approvals, etc)

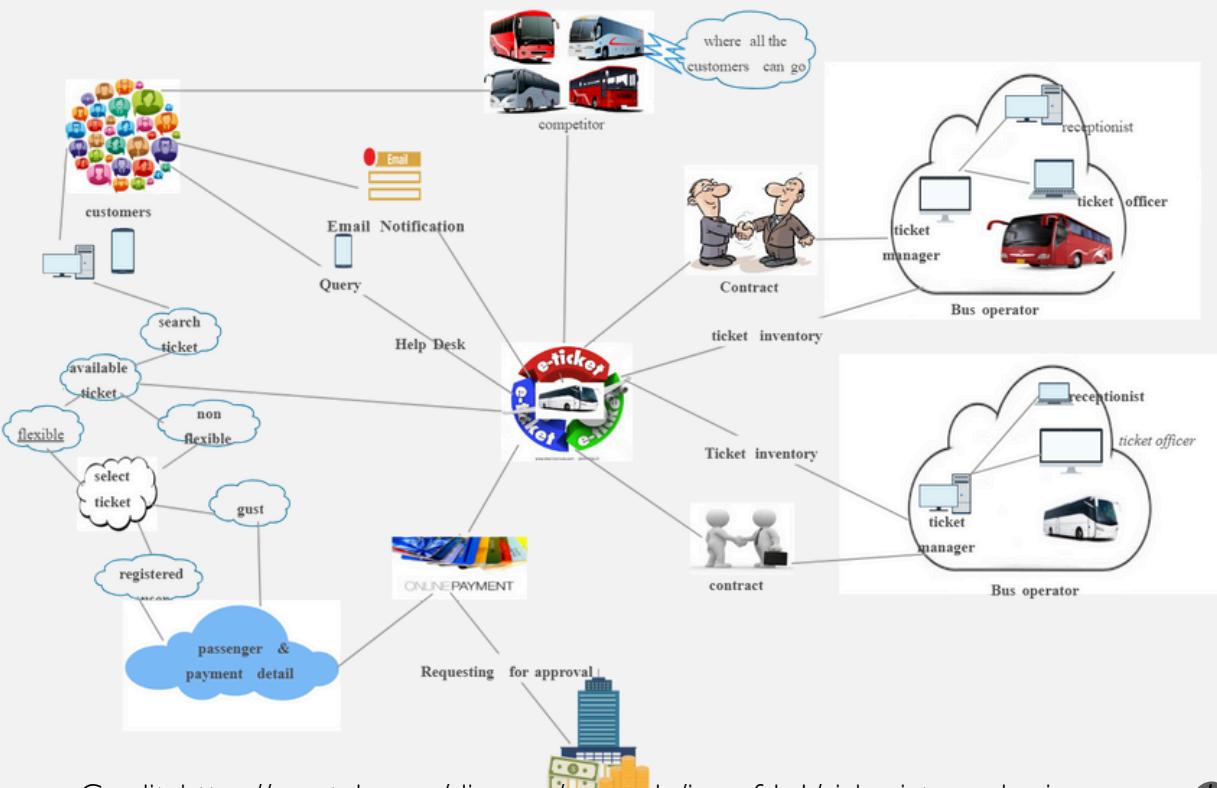
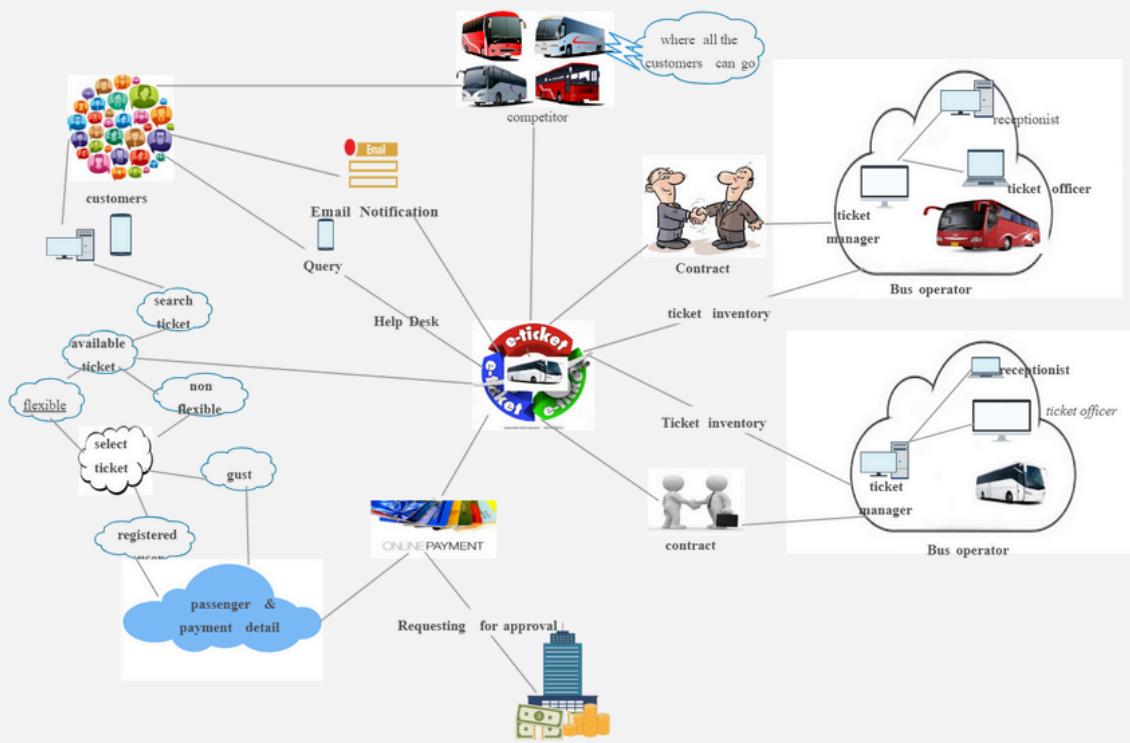


Image Credit: <https://creately.com/diagram/example/iesegfdx1/rich-picture-classic>



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- Analysing a Rich Picture generates questions and discussion that focus on the actor interactions, use of technology and operational efficiency.
- For example:
  - Are there elements of the model that aren't aligned to our business and/or technology strategy?
  - What value is being derived by the actors? Are their expectations being met?
  - Are we delivering sufficient technological support for business operations?
  - What technical vulnerabilities exist in the model? How are we protected from security breaches?
  - How could the information flow be negatively impacted through reduced data quality or loss?

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## To develop a Rich Picture

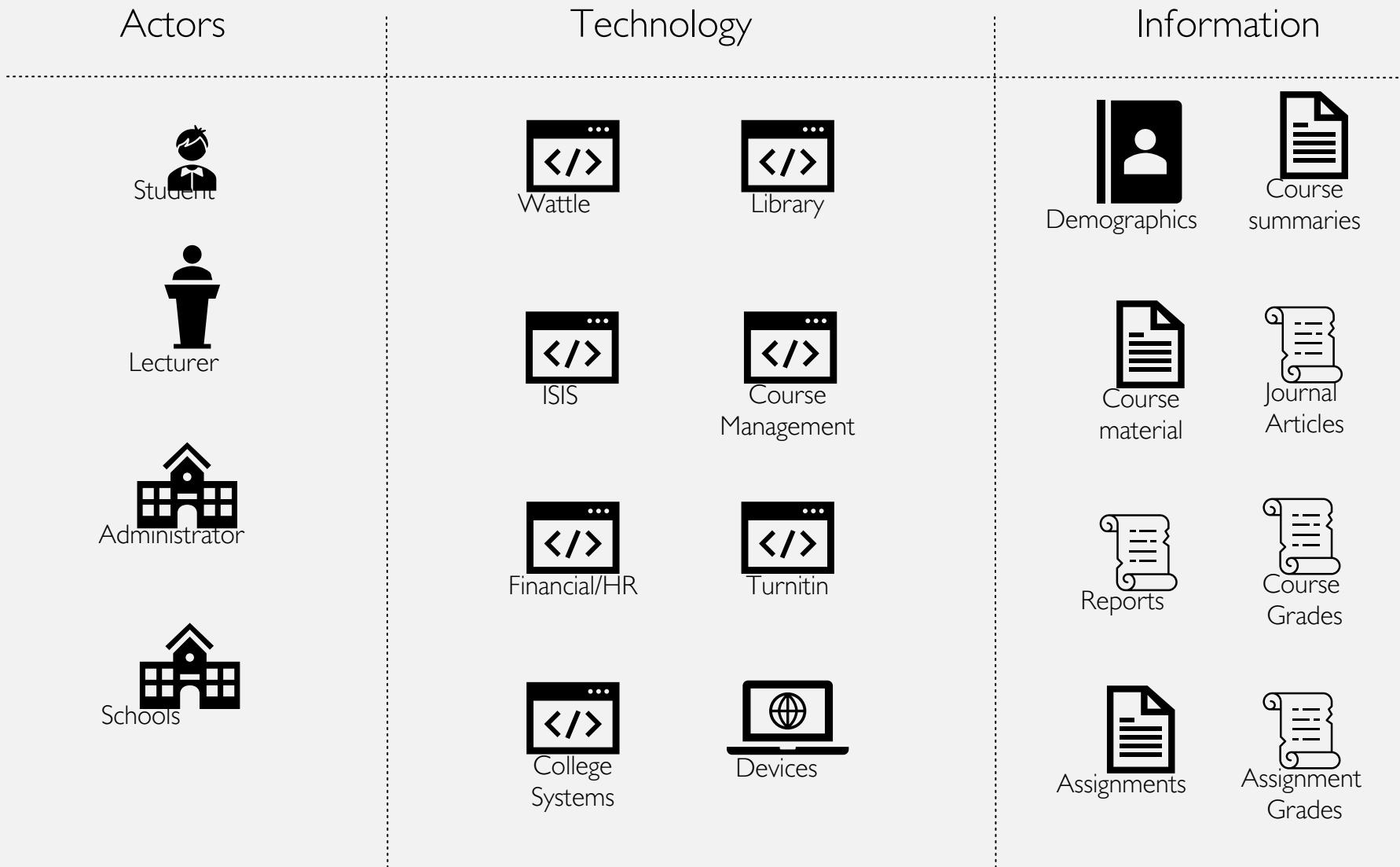
- What is the system that you are trying to model?
- Who are the actors involved in this narrative?
- What types of technology are they using?
- What's the connection between the actors and the technology?
- How does information flow across the architecture?

An example: - ANU  
What's the system?

- ANU's technology to enable teaching activities and support students and staff.  
Who are the major actors?
  - Students, Lecturers, Colleges, Administrators.
- What types of technology?
  - Devices, Wattle, ISIS, Library, Course Management (CMS), Financial/HR, Turnitin, Internet, Intranet.
- What's the connection?
  - Teaching activities, assignments, course administration, grades.
- How does information flow?
  - Course materials (decks, etc), Demographics, Course summaries, gradebook, Assignments, Reports, Requests, Journal Articles, etc.

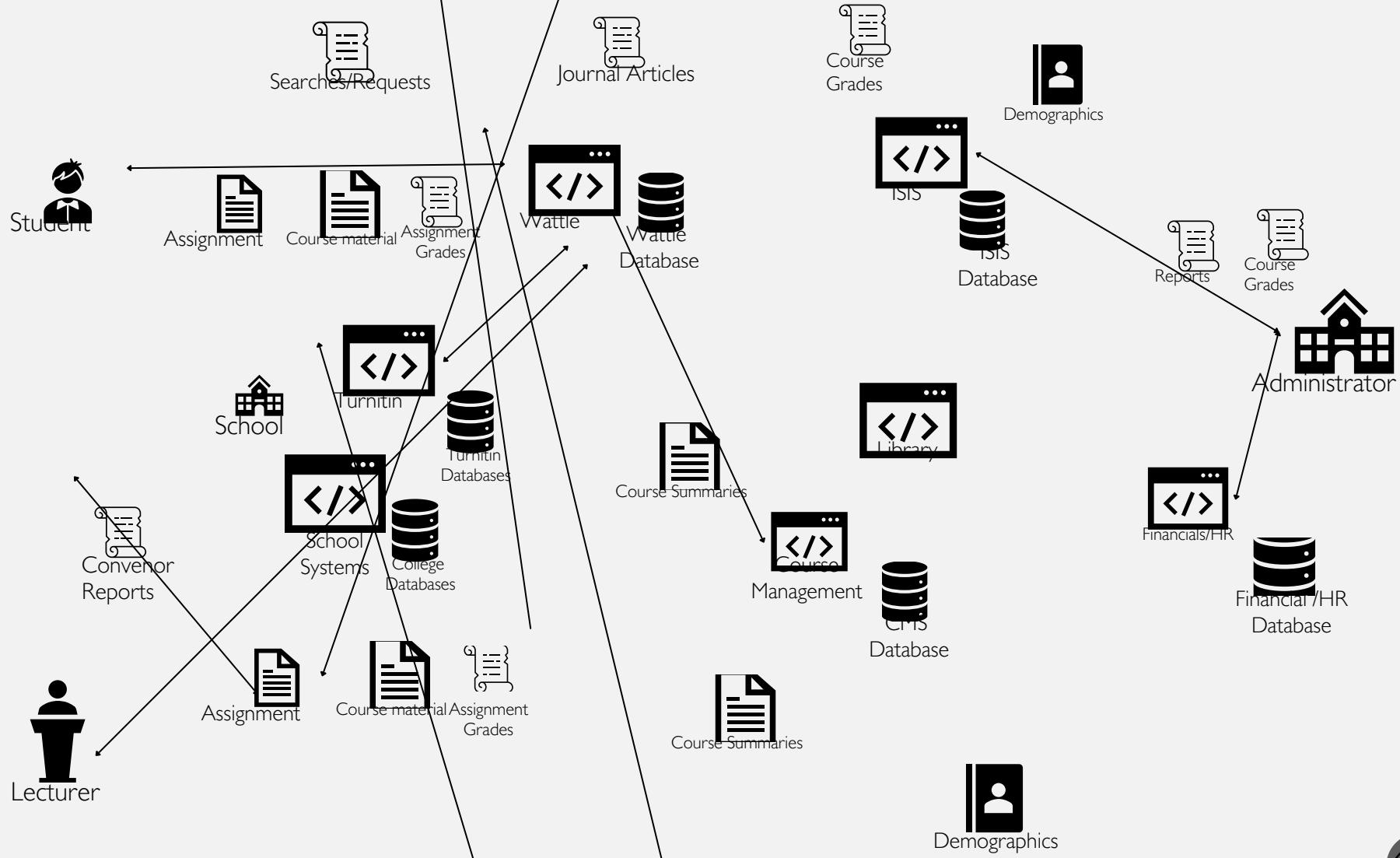
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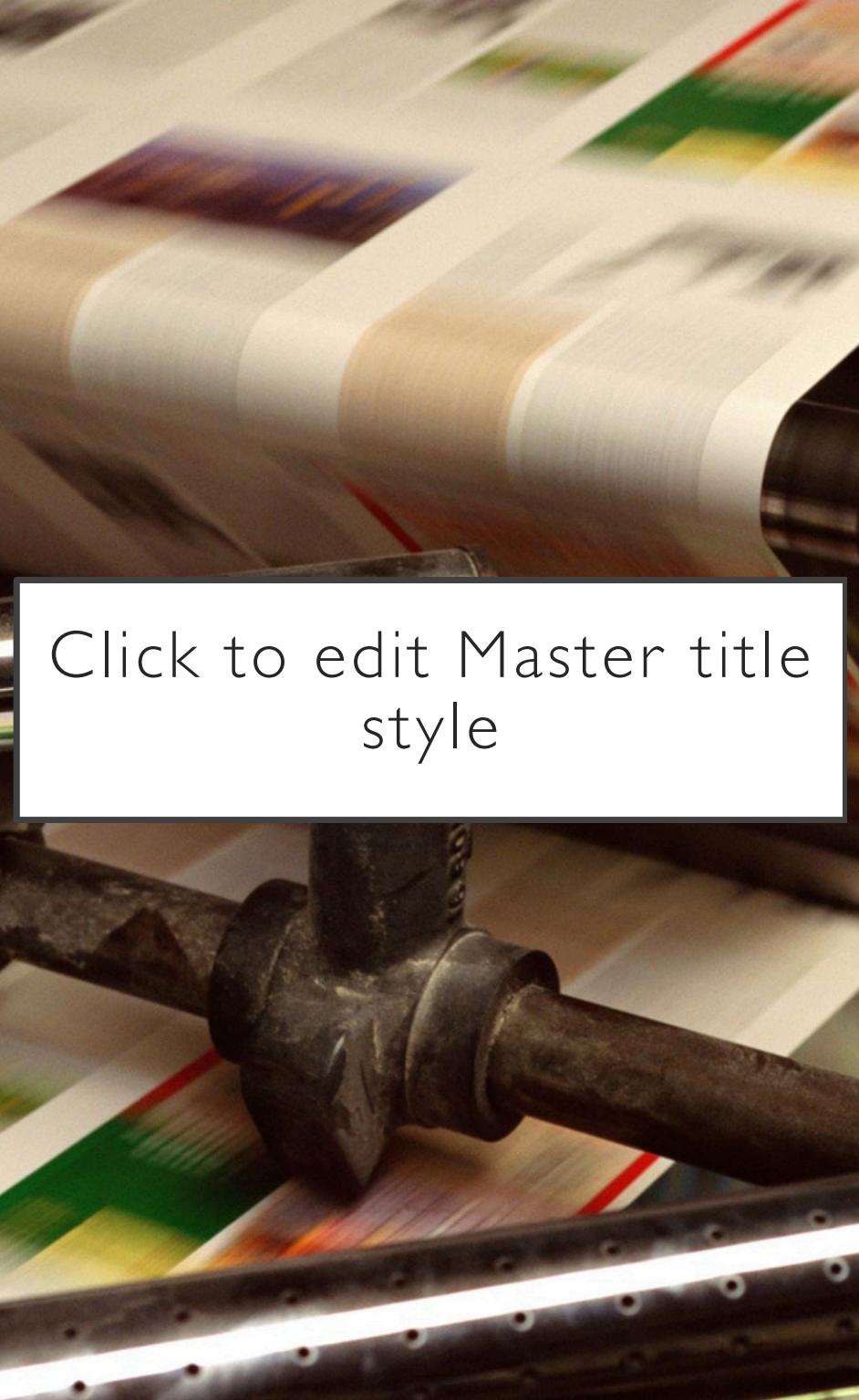
System - ANU's technology to enable teaching activities and support students and staff.



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ANU's use of technology to enable teaching activities and support students and staff.



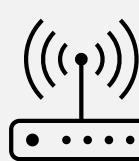
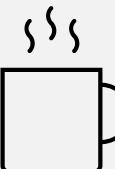
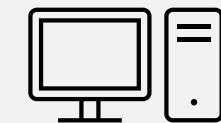
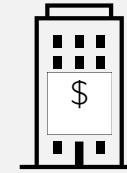
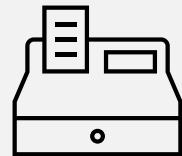
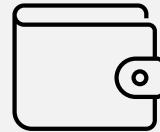


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- **The purpose of this exercise is to draw a Rich Picture that describes a café's use of technology.**
- Work in small groups and follow the process to develop a Rich Picture.
- The level of detail needs to be sufficient so that you could **sit down 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](mailto: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.

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- Here are some graphics that you may want to use in the development of a Rich Picture
- Feel free to use, not use or add more...



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



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.

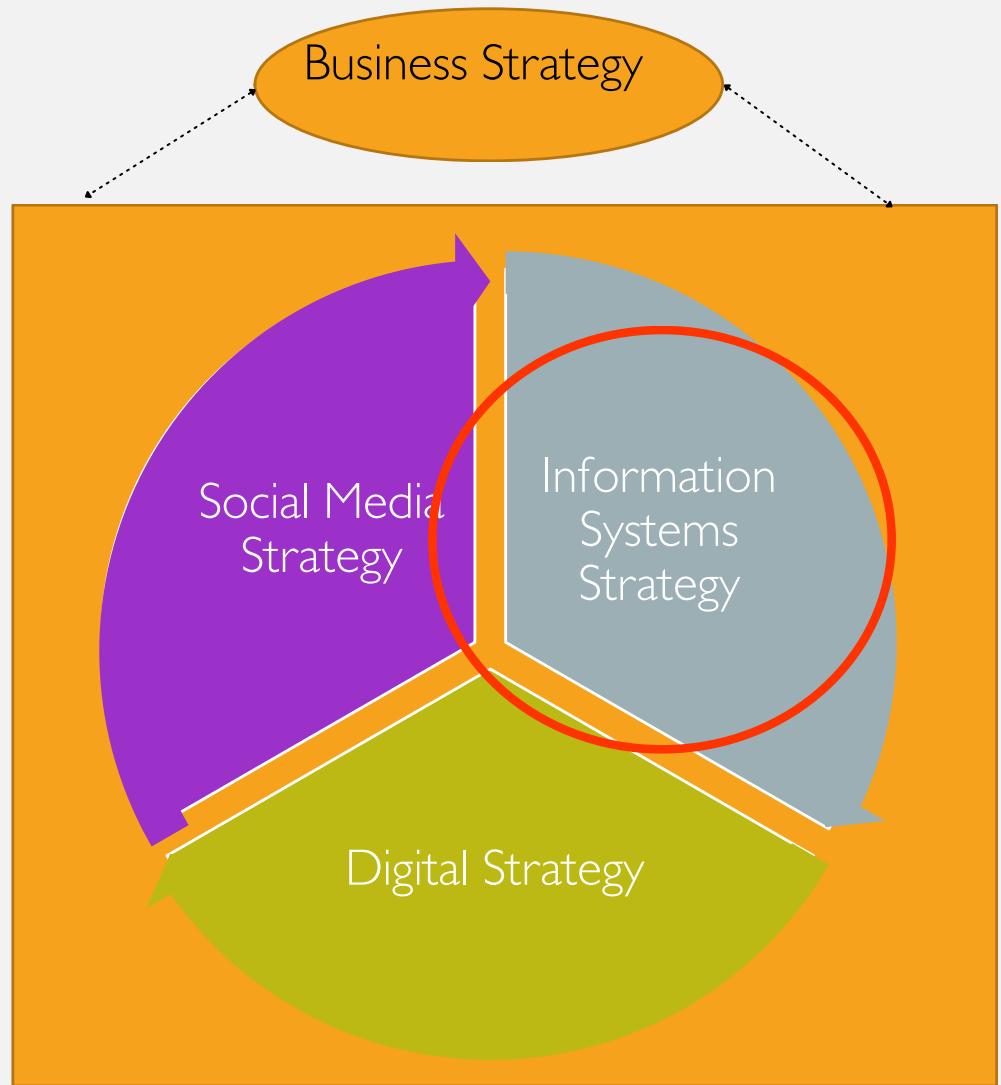
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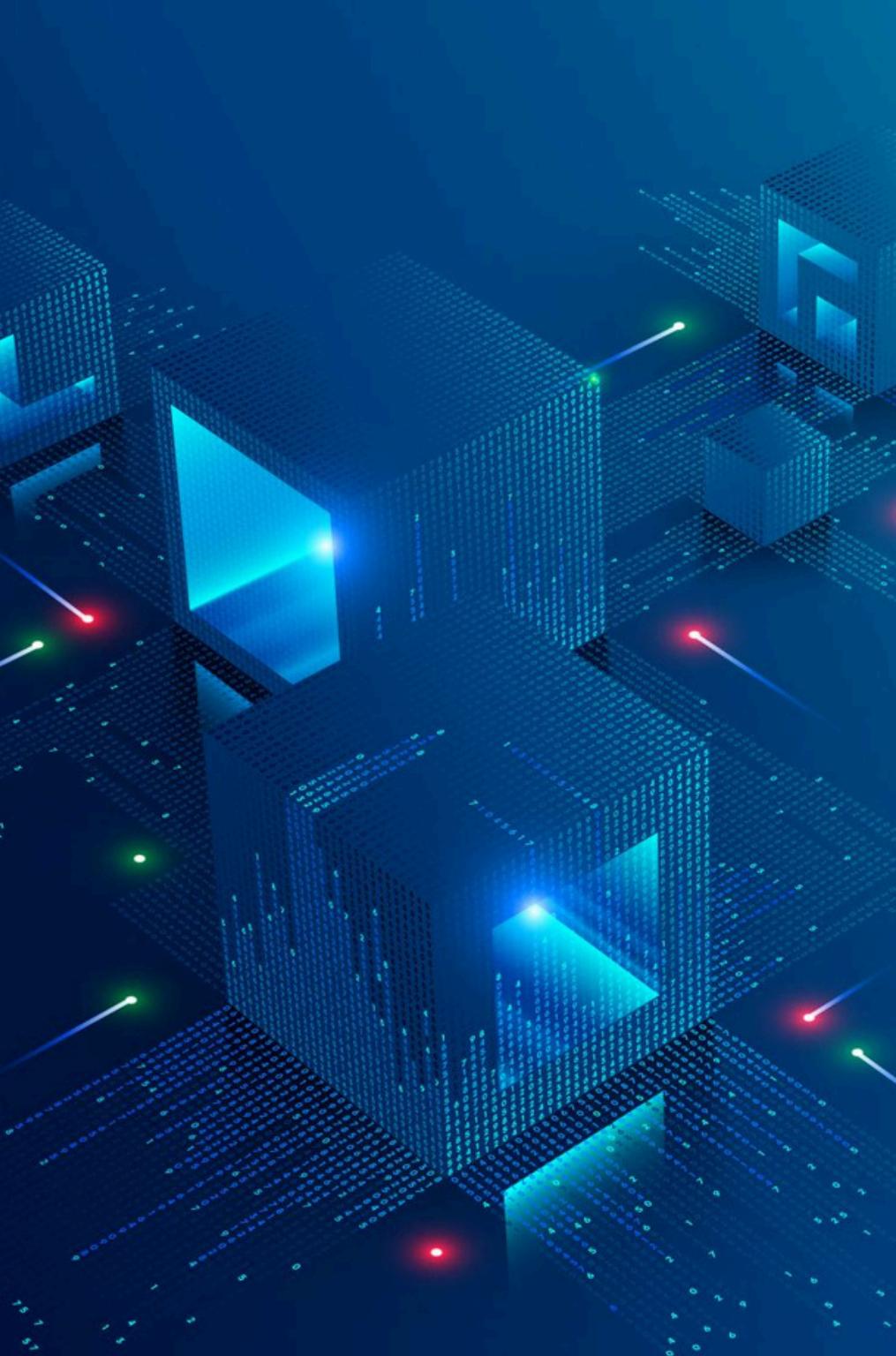
<p><b>Key Partners</b></p>  <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <p><small>Partnerships for partnerships Collaboration Reduction of risk and uncertainty Acquisition of external resources and activities</small></p>	<p><b>Key Activities</b></p>  <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <p><small>Components Production Problem Solving Platform Network</small></p>	<p><b>Value Propositions</b></p>  <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundle of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <p><small>Characteristics Unique Performance Customer "Customer is the star" Design Price Pain Cost Reduction Risk Reduction Autonomy Convenience/Usability</small></p>	<p><b>Customer Relationships</b></p>  <p>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 costly are they?</p> <p><small>Examples Email newsletters Personal Assistant Social media links Communication Co-creation</small></p>	<p><b>Customer Segments</b></p>  <p>For whom are we creating value? Who are our most important customers?</p> <p><small>Mass Market Niche Market Segmented Multi-channel Platform</small></p>
<p><b>Key Resources</b></p>  <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <p><small>Types of Resources Physical (land, equipment, buildings, vehicles, raw materials, supplies, fixtures, furniture, software, intellectual property, copyrights, design, patents, trademarks)</small></p>	<p><b>Channels</b></p>  <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are they currently integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <p><small>CHANNEL PRINCIPLE A channel is a route or series of routes along which an organization moves its products and services. A channel is a distribution system. A channel is a path through which a firm reaches its market. A channel is a path through which a firm reaches its market. A channel is a path through which a firm reaches its market. A channel is a path through which a firm reaches its market.</small></p>			
		<p><b>Cost Structure</b></p>  <p>What are the most important costs inherent in our business mode? Which Key Resources are most expensive? Which Key Activities are most expensive?</p> <p><small>Cost Structure Costs of production, overhead, labor, materials, energy, equipment, facilities, insurance, taxes, depreciation, interest, etc. Value Drivers (factors in value creation, premise value proposition) SAMPLE CHARACTERISTICS Fixed costs, variable costs, overhead, economies of scale, economies of scope</small></p>	<p><b>Revenue Streams</b></p>  <p>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?</p> <p><small>STREAM PRINCIPLE A stream is a flow of revenue or value creation. A stream is a flow of revenue or value creation. A stream is a flow of revenue or value creation. A stream is a flow of revenue or value creation. A stream is a flow of revenue or value creation. A stream is a flow of revenue or value creation.</small></p>	



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- 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.





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- 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.

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## 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

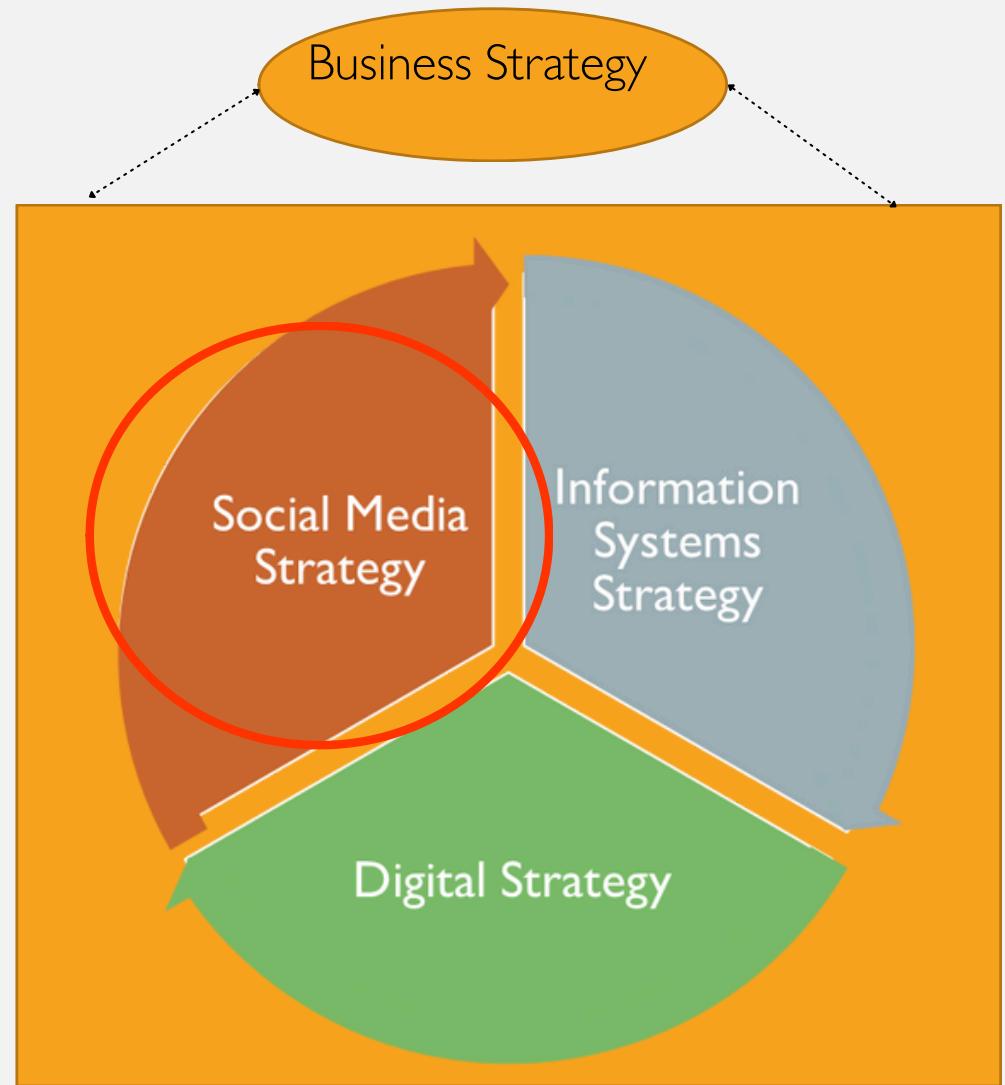


# The Information Systems Strategy – what makes a good one?

- 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.

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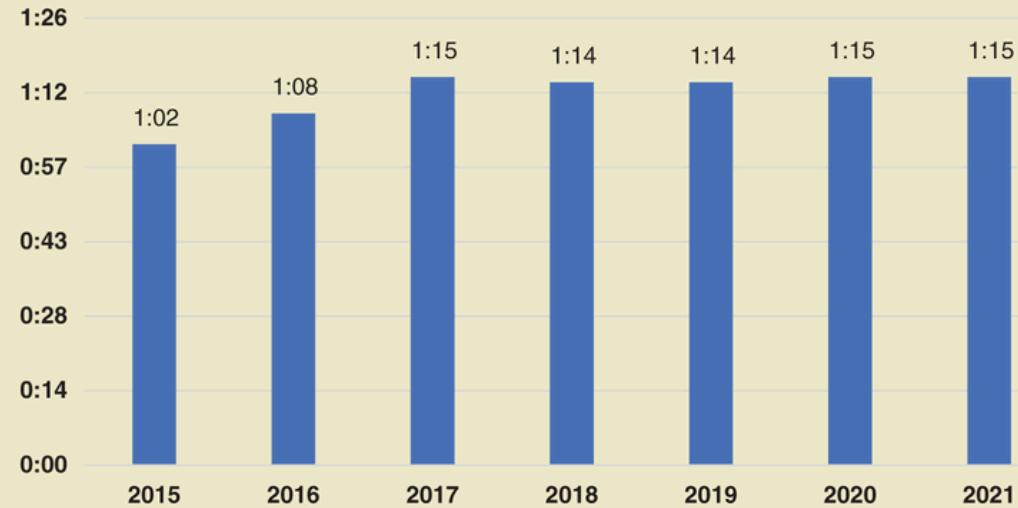


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- Social Media helps us establish our personal brand as we post to friends, family, communities and, potentially, complete strangers
- Employers use Social Media to evaluate potential candidates and it should be assumed that the data you post on any 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.



**Average Time Spent on Social Networks by Users in the U.S. 2015–2021 (Hrs:Min per day)**



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“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

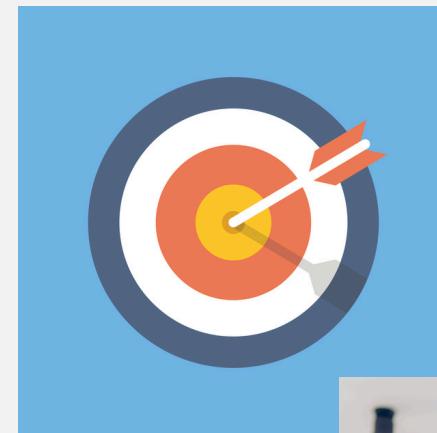


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- Successfully creating a positive and profitable presence on Social Media requires careful thought and a well designed plan.
- Random tweets, videos and posts might work but risky
- In business strategy we're trying to realise opportunities and solve 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



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An organisations 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

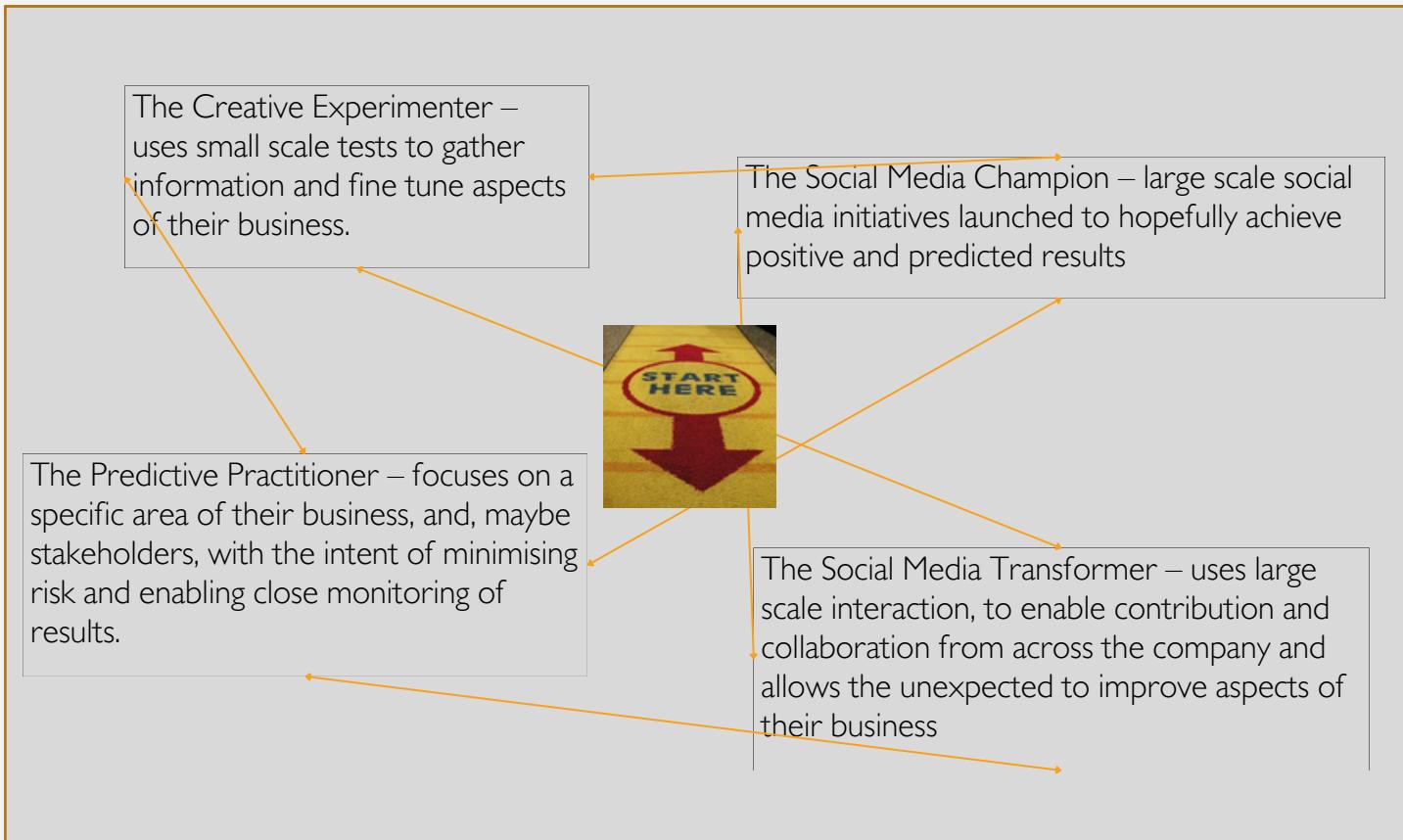
Clorox – created a website that poses questions to customers and suppliers with the intent of gathering feedback and suggestions.

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.

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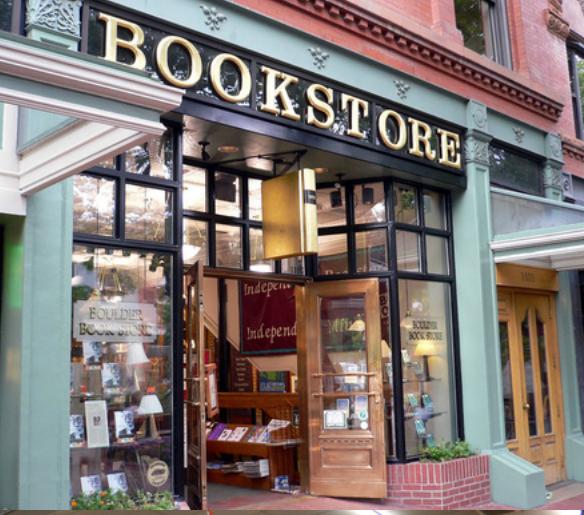


## Class Discussion

- 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?

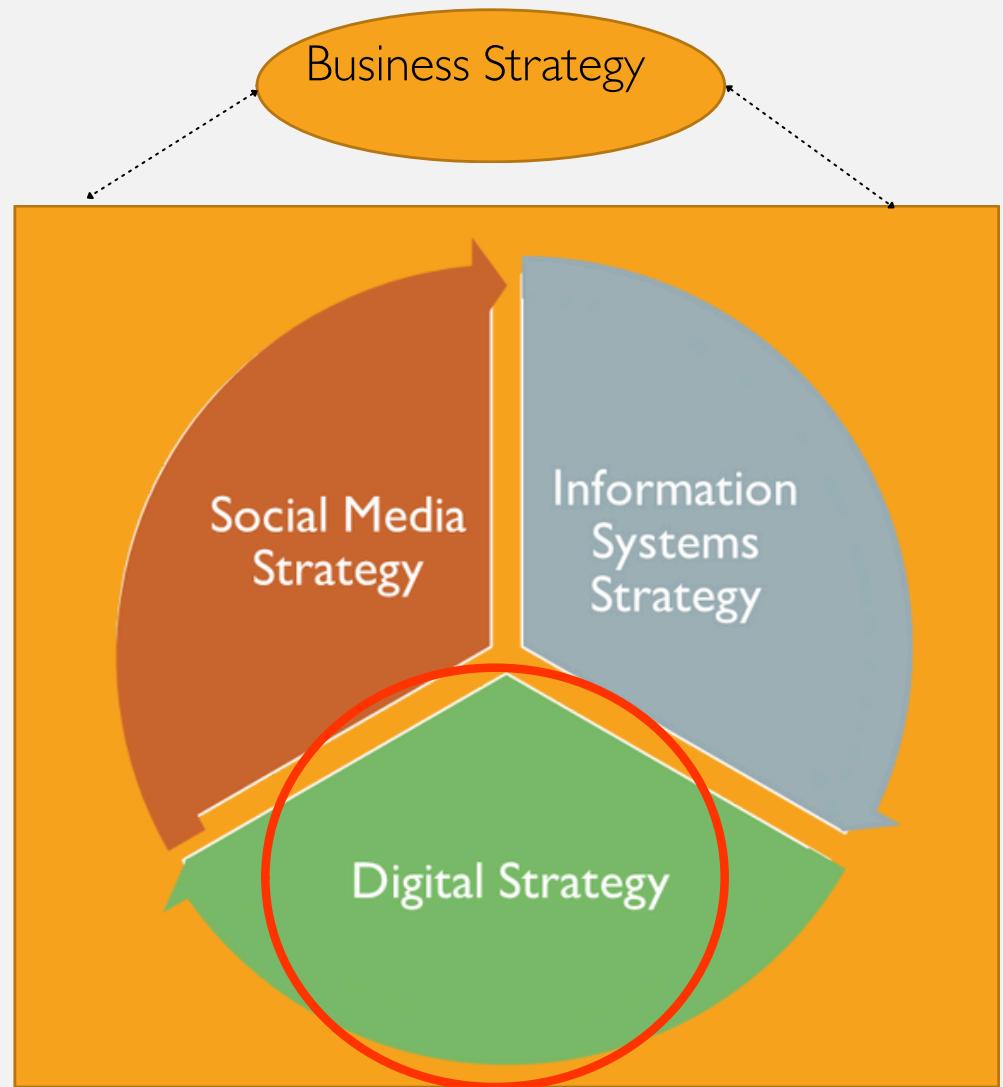
## In Class exercise – 20 minutes

- 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.
  1. 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?



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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

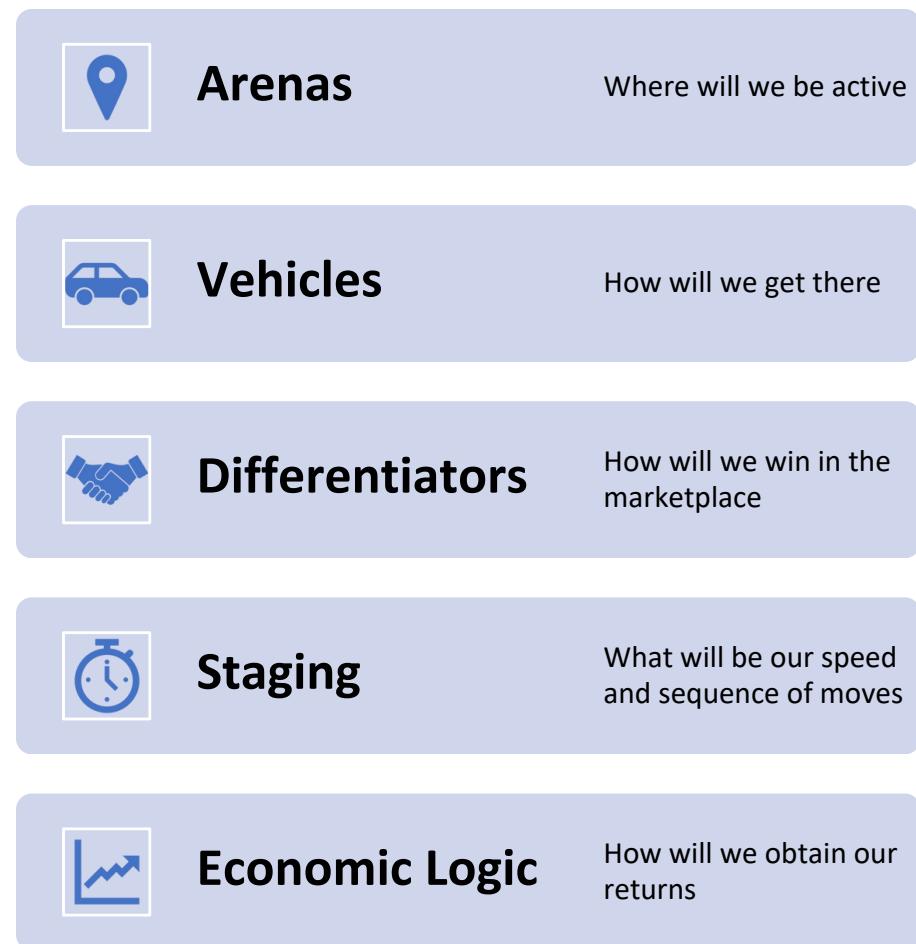
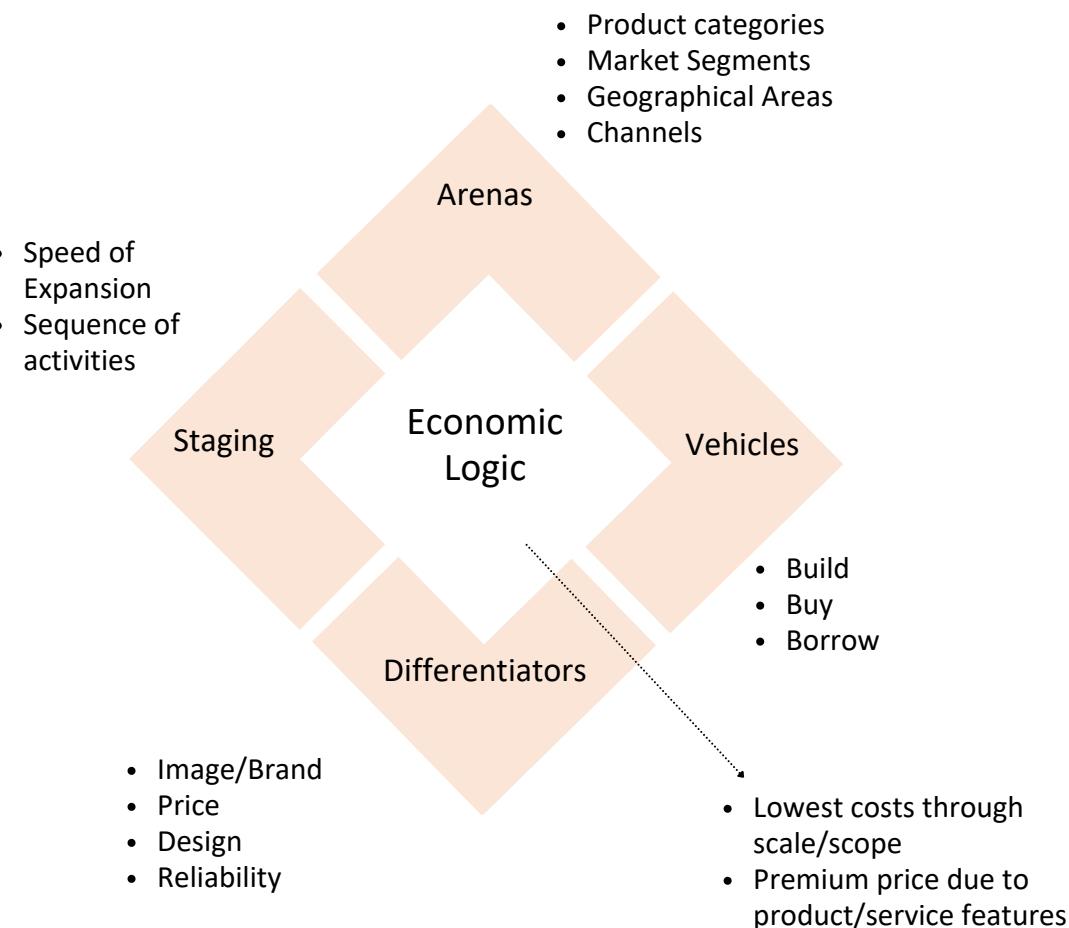
- **What's the scope of the strategy?**
- **How will this change our product/service offerings?**
- **How are we creating/realising value and for whom?**
- **What will differentiate us from our competition?**
- **How can we reach target stakeholders?**
- **How quickly can we realistically implement our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

Processing

Performance  
(Economic Logic)

Output

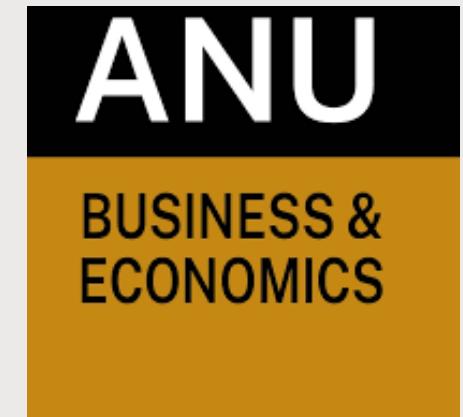
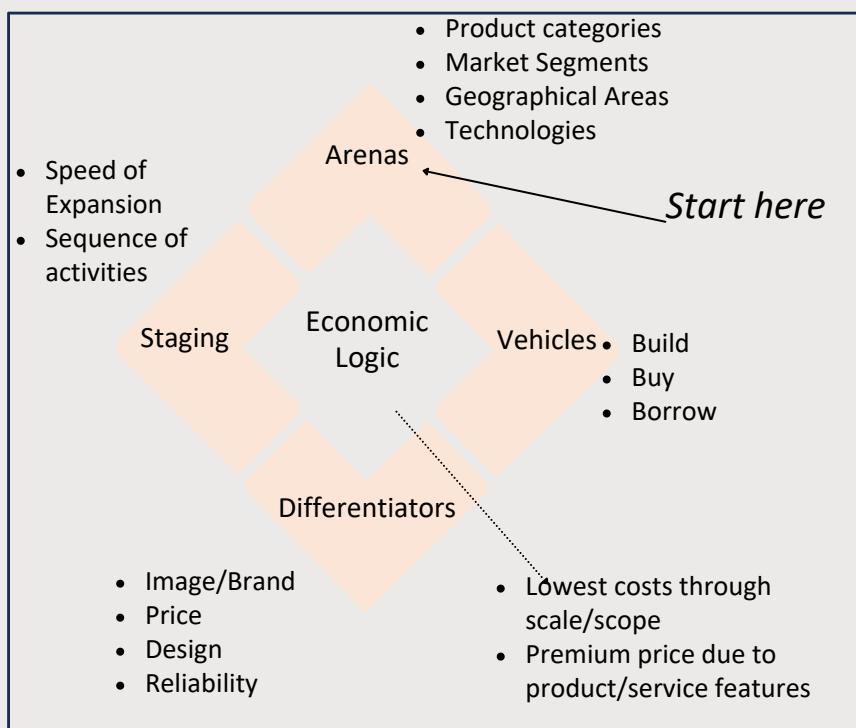
# Developing the Digital Transformation Strategy, The Strategy Diamond



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.



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- In Week 2, we covered the following:
  - Rich Picture
  - Information Systems Strategy
  - Social Media Strategy
  - Digital Strategy
- Have you started on your BAR??
- Remember Mid Semester Quiz in Week 6 – document your seminar and quiz review notes for each week.
- See you next week !!