

# **BUSINESS INFORMATION SYSTEMS (INFSI001)**

## **SEMINAR - WEEK I**

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## ACKNOWLEDGMENT OF COUNTRY

I would like to begin by acknowledging Ngunnawal and Ngambri peoples, the Traditional Custodians of the land on which we meet today, and pay my respects to their Elders past, present and emerging. I extend that respect to all Aboriginal and Torres Strait Islander peoples here today.

# WEEK I AGENDA

Introductions

Course Approach

Topic Overview

Assessments

Finding and working academic literature

Business Strategy

Information Systems Strategy

Systems modelling

Week I wrap-up

## INTRODUCTIONS MY BACKGROUND



*My favourite city....*

### Professional Experience

- IBM (1998 – 2016)
  - Associate Partner
  - Program and Project Manager
- Deloitte & Touche
- Ernst & Young
- Worked in the USA, Singapore, Thailand and Australia

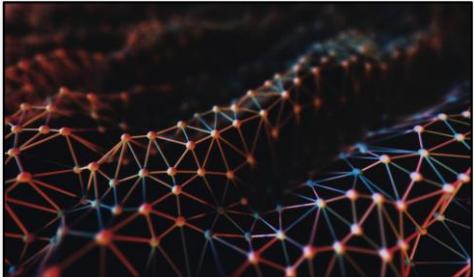
### Education

- MBA (Emory University, Atlanta)
- B. Sc (University of Adelaide)
- Project Management Professional certified (PMI)
- Masters Certificate in Project Management (George Washington University)

### Personal

- I'm married with two kids at ANU, one graduated (one more to go...)

# COURSE OVERVIEW



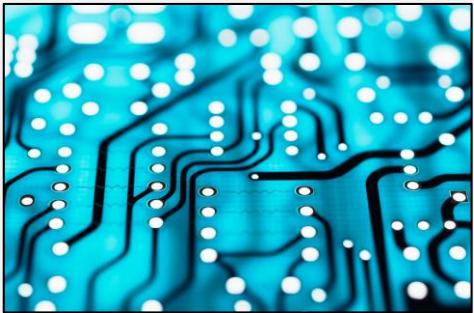
In this course we investigate how business uses technology to derive strategic and operational value.



We look at a wide range of technologies including traditional systems but also discuss the impact of emerging/cutting edge technologies e.g. Artificial Intelligence (AI), Metaverse, etc.



We focus a lot on organisations but to fully understand the business impact of technology we need to describe how individuals interact with technology which raises issues of privacy and other ethical concerns.



The seminars are in-person and you are expected to participate in the discussion. The seminars are recorded but tutorials are not.



The weekly tutorials start in Week 2 and extend the weekly content and provide exercises that help you deepen your understanding.



We will draw content from the textbook as well as academic journals and other reliable sources.



Note that the order of weekly topics may be different to the course summary.



Please check the Wattle site regularly for course information and office hours.

# 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.*



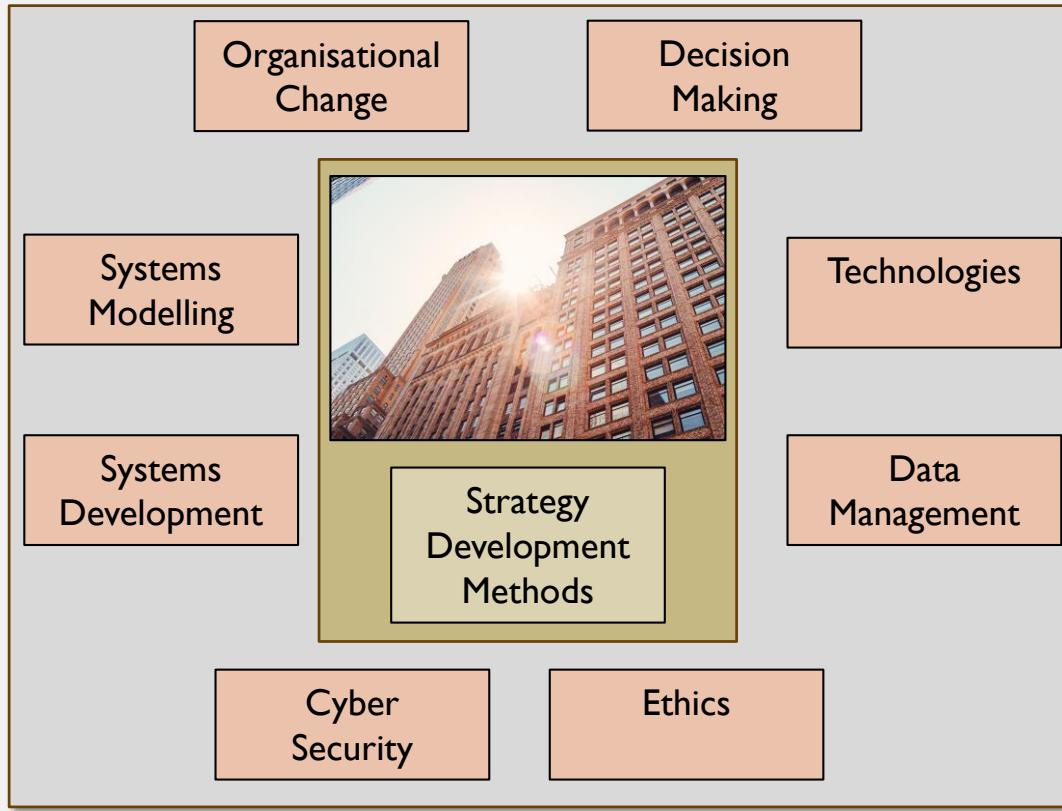
Markets



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.*

# COURSE STRUCTURE

## ( 1 of 2 )

### Strategy Development Methods

- Business Model Canvas
- Digital Strategy Diamond
- IT Strategy
- SWOT
- Social Media Strategies

### Systems Modelling

- General Systems Model
- Rich Picture
- Enterprise Architecture: TOGAF (organization)
- e-Commerce models

### Systems Development

- Agile
- Waterfall
- Design Thinking
- System Selection

### Organisational Change

- Leadership Style (Transformational, Transactional, etc.)
- Lewin's model and force field analysis
- IT Organisation and Role of the CIO
- The Value of IT
- Tuckman

# COURSE STRUCTURE

## (2 of 2)

### Technologies

- Enterprise Resource Planning (ERP)
- Cloud
- Emerging and Disruptive
- Artificial Intelligence
- VR and AR, Metaverse, Quantum, IoE

### Decision Making

- Simon's model
- Heuristics
- Structured, Semi structured, Unstructured

### Data Management

- Data Management Strategy
- Information Architecture
- MIS/Balanced Scorecard
- Data Hierarchy

### Cyber Security

- Threat Types
- Ethical Hacking
- Data Breaches
- Risk Management Strategy

### Ethics

- Egoism
- Utilitarianism
- Natural Law
- Respect for Persons

# COURSE ASSESSMENTS SUMMARY

Assessment Item	Word count (+/-10%)	Due Date	Weight (%)
Mid Semester Quiz	N/A	Week 6 (In Class)	20
BAR Part 1:- Report	2000	Week 7	25
BAR Part 2: Oral Review	N/A	Weeks 8,9 and 10	15
Tutorial Participation	N/A	Ongoing	10
Final Exam	N/A	Examination Period	35

- Please read the briefs carefully to make sure you know when the assessments are due.
- All assignments are individual and must be your own work.
- **Be specific – generic content will not do well!!**
- **Make sure you answer the question.**
- If you aren't sure how to get started on an assignment, or "get stuck" while working on it, you are encouraged to ask for help!!
- You're expected to demonstrate independence and a depth of thinking, but I don't want you "spinning your wheels".
- You're encouraged to plan and manage your time so you can stay on top of the course work and assignments.
- Note that penalties apply for late submission per ANU policy.

## ASSESSMENT OVERVIEW

### MID SEMESTER QUIZ (20%)

- A **closed book, in person** quiz will be held in Week 6 during the class.
- 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.
- There are no extensions available for this assessment.
- **Marking criteria:** 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.
- **Due date:** In class in Week 6 via the course Wattle site.
- **Feedback:** The grade for the Mid Semester Quiz will be provided by the end of Week 6 (28/03/25).



## 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.



## 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.



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

## ASSESSMENT OVERVIEW

### TUTORIAL PARTICIPATION(10%)

- You are expected to attend in-person tutorials and contribute to in-class activities and discussions.
- This mark will be awarded based on your individual contributions in tutorials.
- However, please note that raising and answering questions and/participating in in-class discussions does not automatically guarantee a high level of contribution.
- Your inputs must add significant intellectual value to our discussions. Such examples may include, but are not limited to, raising and answering substantive issues and questions, sharing relevant ideas, accurately applying course concepts and pointing out relationships to earlier topics and discussions.
- This assessment will be calculated as the average contribution score across all tutorials.



## ASSESSMENT OVERVIEW

### FINAL EXAMINATION (30%)

- A single in-person examination, covering all course content, will be held during the end of semester examination period.
- The examination will be **two hours in duration** plus a reading time.
- Specific details of the exam date will be available closer to the commencement of the examination period at <https://exams.anu.edu.au/timetable/>.
- Please refer to Wattle site for more information to be provided by Week 10.
- The scope of the final exam will include all course materials including seminar content, in-class exercises, readings and assessments.
- Grades for this assessment will be released with the final grades for the semester (26/06/25).
- No feedback will be provided for this assessment.



# THE BAR ASSESSMENT

## FINDING GOOD ACADEMIC LITERATURE

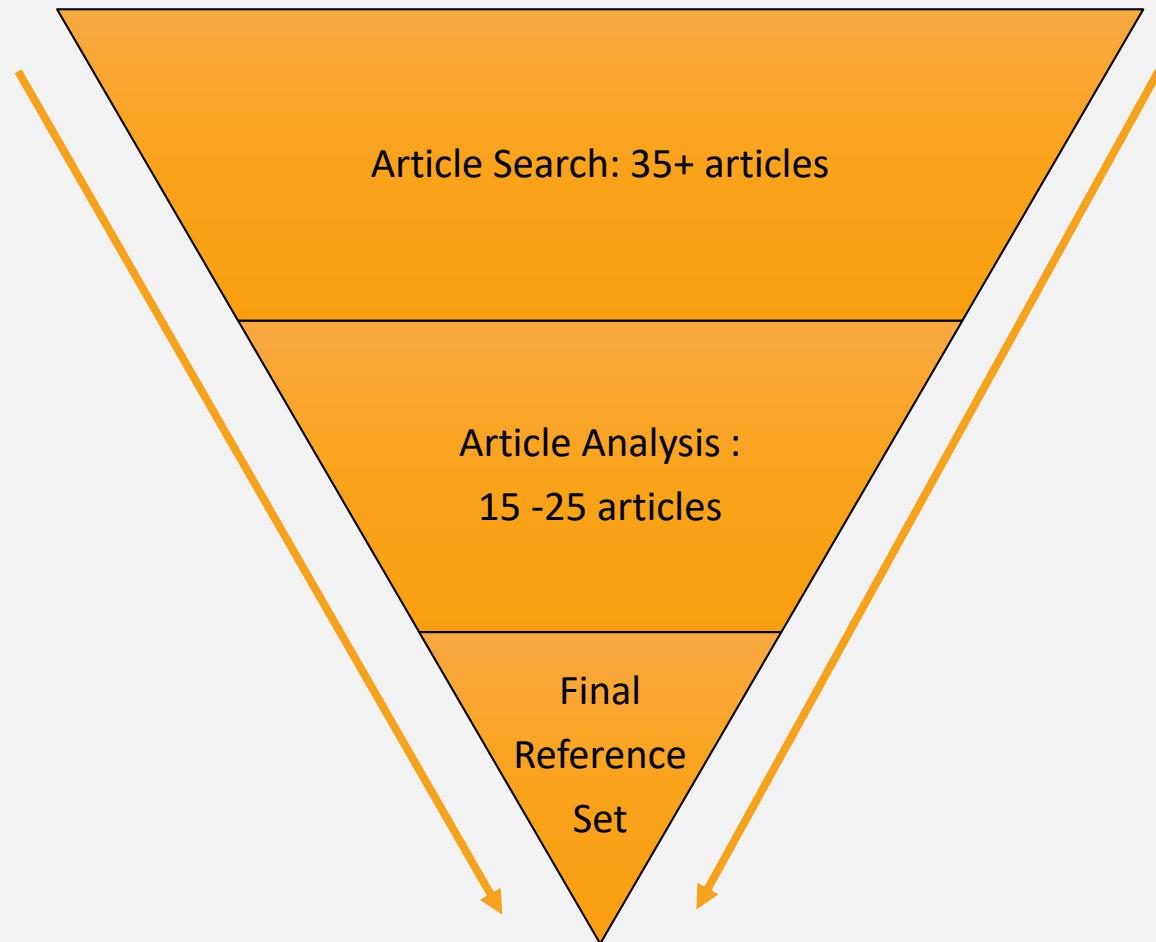
You need to demonstrate depth of analysis and understanding of the academic literature.

Time management is generally not done well by students so, do yourself a favour, and plan out your semester so you understand how you will have the time to complete your assignments.

Warning – don't copy/past passages directly from the article.

Also avoid using too many or very long quotes. Pushes up your similarity score and its better to present your analysis in your own words.

### The Literature Search Inverted Pyramid



***This process takes time so start early !!***

- *Researching and finding good references starts broad and narrows based on your reading and analysis*
- *As a rough guide, for a 2000-word literature-based assessment you should have 15 – 20 good quality references.*

# FINDING GOOD ACADEMIC LITERATURE

## THE ABDC SHEET



AUSTRALIAN BUSINESS DEANS COUNCIL

### 2022 ABDC Journal Quality List

Current to the review finalised 15 March 2023 including minor textual changes

Journal Title	Publisher	ISSN	ISSN Online	Year Incep	For	2022 rating
Academy of Management Annals	Academy of Management	1941-6520	1941-6067	2008	3507	A*
Academy of Management Discoveries	Academy of Management	2168-1007		2015	3507	A
Academy of Management Journal	Academy of Management	0001-4273	1948-0989	1958	3507	A*
Academy of Management Learning and Education	Academy of Management	1537-260X	1944-9585	2002	3507	A*
Academy of Management Perspectives	Academy of Management	1558-9080	1943-4529	1987	3507	A
Academy of Management Review	Academy of Management	0363-7425	1930-3807	1976	3507	A*
ACM Transactions on Computer-Human Interaction	Association for Computing	1073-0516	1557-7325	1994	4609	A*
ACM Transactions on Computing Education	The Association for Compi	1531-4278	1531-4278	2009	4609	C
ACM Transactions on Information Systems	Association for Computing	1046-8188	1558-2868	1983	4609	C
Acta Psychologica	Elsevier	0001-6918	1873-6297	1936	3507	A
Action Learning and Action Research Journal	ALARA Association Inc.	1326-964X	1326-964X	1996	3507	C
Action Learning Research and Practice	Taylor and Francis Online	1476-7333	1476-7341	2004	3507	C
Administration and Society	Sage Publications	0095-3997	1552-3039	1975	3507	B
Administrative Science Quarterly	Sage Publications	0001-8392	1930-3815	1956	3507	A*
Administrative Theory and Praxis	Taylor & Francis Online	1084-1806	1949-0461	1979	3507	B
Advances in Experimental Social Psychology	Elsevier	0065-2601	1557-8410	1964	3507	A*
Advances in International Management	Emerald Group Publishing	1571-5027		1988	3507	C
Advances in Strategic Management	Emerald Group Publishing	0742-3322		1983	3507	C
African Journal of Economic and Management Studies	Emerald Group Publishing	2040-0705	2040-0713	2010	3507	C
AIS Transactions on Human-Computer Interaction	Association for Informatio	1944-3900		2009	4609	A
Alternatives: global, local, political	Sage Publications	0304-3754	2163-3150	1974	3507	A

Journal rankings by Field of Research (FoR)						
For	Description	Total Journals	A* %	A %	B %	C %
3501	Accounting, auditing and accountability	156	8.3	19.2	30.8	41.7
3502	Banking, finance and investment	172	7.6	22.1	33.1	37.2
3503	Business systems in context	26	0	50	26.9	23.1
3504	Commercial services	95	3.7	19	37.9	40
3505	Human resources and industrial relations	110	4.6	30	38.2	27.3
3506	Marketing	157	7	24.2	40.1	28.7
3507	Strategy, management and organisational behaviour	376	11.2	29	27.1	32.7
3508	Tourism	69	5.8	23.2	36.2	34.8
3509	Transportation, logistics and supply chains	82	9.8	24.3	34.2	31.7
3599	Other commerce, management, tourism and services	188	5.9	36.2	35.6	22.3
3801	Applied economics	522	7.3	18.2	33.3	41.2
3802	Econometrics	32	21.9	21.9	21.9	34.4
3803	Economic theory	32	15.6	25	31.3	28.1
3899	Other economics	99	0	5.1	26.3	68.7
4609	Information systems	180	7.8	23.3	28.3	40.6
4801	Commercial law	299	6	27.8	28.8	37.5
4905	Statistics	85	8.2	36.5	29.4	25.9

- The ABDC sheet is available on the course Wattle site.
- It gives you a guide which helps you find articles from good quality academic journals.
- For this course most of your journal articles will come from A and B rated journals.
- You might find some A\*, which is good, but generally these tend to be more theory focused.
- Try to avoid using C rated journals.

# WORKING WITH ACADEMIC LITERATURE

- You can find academic articles using Google Scholar, ANU Supersearch or some other search engine.
- How to read academic articles (suggested approach):
  1. First, read the article abstract and skim the introduction and findings/conclusion. If you believe that the article is good and relevant then keep it, otherwise throw it away.
  2. Now that you have a good and relevant article skim the rest of the article to confirm your belief that it should be included as a reference. Unless its relevant, you can generally skip the methodology section and detailed mathematical analysis. If you change your mind and are doubting its relevance, then hang on to it but move onto other good relevant articles. If it's a good reference move to step 3.
  3. You now have a good, relevant article that you want to include as a reference. Write a summary of the article, maybe using bullet points, focusing on the main purpose and key findings of the article. Make sure you pull out any content that is relevant to your assessment.
  4. Tip - review the articles reference set. You may find other useful articles in the references of relevant articles. This is particularly true of recently written articles.

# EXAMPLE – MY FIRST SEARCH FOR SOCIAL MEDIA STRATEGY

ANU Library SuperSearch

< Back to results

Abstract social media  
AND Abstract strategy

Publication date  
1 year 3 years 5 years 10 years  
from 7/5/2022

Fewer search options >

**Content type**   Any Type  Archival Material  Art  Audio Recording

**Discipline**   Any Type  agriculture  anatomy & physiology  anthropology

**Language**   Any Type  Afrikaans  Albanian  Amharic

**Limit to**  Peer reviewed publications

**Exclude from results**  Newspaper articles  Book Reviews  Dissertations

**Expand your results**  Include results from outside your library's collection

Search Clear Form

This yielded several articles that focused on the evaluation of social media strategies for an individual organisation and an industry.

But I decided to be more focused and look for articles focused on the tourism industry.

# EXAMPLE MY SECOND SEARCH- INCLUDING TOURISM...

The screenshot shows the ANU Library SuperSearch interface. At the top, there is a navigation bar with the ANU Library logo, 'SuperSearch', and language options ('English'). Below the navigation bar, the search query is displayed: 'social media', 'strategy', and 'tourism'. A large black oval highlights the search terms 'social media', 'strategy', and 'tourism'. The search interface includes sections for 'Publication date' (with dropdowns for '1 year', '3 years', '5 years', and '10 years'), 'Content type' (checkboxes for 'Any Type', 'Archival Material', 'Art', and 'Audio Recording', with 'Any Type' checked), 'Discipline' (checkboxes for 'Any Type', 'agriculture', 'anatomy & physiology', and 'anthropology', with 'Any Type' checked), 'Language' (checkboxes for 'Any Type', 'Afrikaans', 'Albanian', and 'Amharic', with 'Any Type' checked), and various filters like 'Limit to Peer reviewed publications' (checked) and 'Exclude from results' (checkboxes for 'Newspaper articles', 'Book Reviews', and 'Dissertations'). At the bottom, there are 'Search' and 'Clear Form' buttons.

This search yielded some more relevant articles. After this search I felt that I had several articles worth pursuing which is pretty good for 10 minutes work. Note that I wasn't familiar with some of the journals, so I checked their academic "quality." by referring to the ABDC spreadsheet.

# MY NEXT STEP

- In addition to continuing to use SuperSearch to find some good articles I read the abstract and references of one article that I suspected would be relevant.
- When you find a good, recent article – look at their references for more good articles.
- Note that some of these articles may be dated so be selective about the ones you choose to include as references.
- The Reference List may also give you the names of researchers /authors that are working in your area of interest so their names can become search terms.

The social strategy cone: Towards a framework for evaluating social media strategies

Robin Effing <sup>a,\*</sup>, Ton A.M. Spil <sup>b</sup>

<sup>a</sup> Saxion University of Applied Sciences, P.O. Box 70000, 7500 KB Enschede, The Netherlands  
<sup>b</sup> University of Twente, School of Management and Governance, P.O. Box 217, 7500 AE Enschede, The Netherlands

**ARTICLE INFO**

Article history:  
Received 16 January 2015  
Received in revised form 31  
Accepted 31 July 2015

**ABSTRACT**

Social media is growing rapidly. Providing both risks and opportunities for organizations as it does. The

**Elements of strategic social media marketing: A holistic framework**

Reto Felix <sup>a</sup>, Philipp A. Rauschnabel <sup>b,\*</sup>, Chris Hinsch <sup>c</sup>

<sup>a</sup> Marketing Department, College of Business and Entrepreneurship, The University of Texas Rio Grande Valley, 1201 W University Dr, Edinburg, TX 78501, USA  
<sup>b</sup> Department of Management Studies, College of Business, The University of Michigan-Dearborn, 19000 Hubbard Drive, Dearborn, MI, USA  
<sup>c</sup> Marketing Department, Seldman College of Business, Grand Valley State University, 3114 Seldman Center, 50 Front Avenue, SW, Grand Rapids 49504, MI, USA

**ARTICLE INFO**

Article history:  
Received 29 July 2015

**ABSTRACT**

Social media marketing is an integral element of 21st-century business. However, the literature on social media marketing remains fragmented and is focused on isolated issues, such as tactics for effective communication. The

**Research Paper**

The power of social media storytelling in destination branding

Niels Frederik Lund <sup>a,\*</sup>, Scott A. Cohen <sup>b</sup>, Caroline Scarles <sup>b</sup>

<sup>a</sup> Bournemouth University, Faculty of Management, Department of Events and Leisure, Talbot Campus, Fern Barrow, Poole, Dorset BH12 5BB, UK  
<sup>b</sup> University of Surrey, Faculty of Arts and Social Sciences, School of Hospitality and Tourism Management, Guildford GU2 7XH, UK

**ARTICLE INFO**

Keywords:  
Social media  
Destination branding  
DMOs

**ABSTRACT**

A large part of the global population is now connected in online social networks in social media where they share experiences and stories and consequently influence each other's perceptions and buying behaviour. This poses a distinct challenge for destination management organisations, which must cope with a new reality where destination brands are increasingly the product of people's shared tourism experiences and storytelling in social

**References**

Adams, P. (2012). *Grouped: How small groups of friends are the key to influence on the social web*. California: New Riders.  
Anderson, S., Hamilton, K., & Tonner, A. (2016). Social labour: Exploring work in consumption. *Marketing Theory*, 16(3), 383–400.  
Barnes, K.L. (2015). *The big reveal: Budgets, staffing and the future of social media at DMOs*. <[www.destinationmarketing.org/blog/big-reveal-budgets-staffing-and-future-social-media-dmos](http://www.destinationmarketing.org/blog/big-reveal-budgets-staffing-and-future-social-media-dmos)>. Accessed 18 March 2017.  
Bendix, R. (2002). Capitalizing on memories past, present, and future: Observations on the intertwining of tourism and narration. *Anthropological Theory*, 2(4), 469–487.  
Bertino, M. (2014). *New research: Topics that get a reaction*. Retrieved March 17, 2017, from <<http://kloutblog.liithium.com/t5/Klout-Blog/New-Research-Topics-That-Get-A-Reaction/ba-p/578>>.  
Berthon, P. R., Pitt, L. F., Plangger, K., & Shapiro, D. (2012). Marketing meets web 2.0, social media, and creative consumers: Implications for international marketing strategy. *Business Horizons*, 55(3), 261–271.  
Bierman, J. (2010). Tell me a story. *NZ Business*, 24(10), 40–41.  
Bosker, B. (2010). 71 percent of tweets are ignored, study finds. *Huffington Post*. <[http://www.huffingtonpost.com/2010/10/12/71-percent-of-tweets-are\\_n\\_759176.html](http://www.huffingtonpost.com/2010/10/12/71-percent-of-tweets-are_n_759176.html)>. Accessed 17.03.17.

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 Check for updates

## Article Summaries

Title	Author(s)	Publication	Year	Summary
"Owner project capabilities for infrastructure development" A review and development of the strong owner concept	Graham Winch, Boine Leiringer	IUPM	2016	<p>Very good article that investigates the capabilities of the project owning organisation in-infrastructure projects. The article refers to the owning organisation and does not personify this role to focus specifically to an individual called the Project Owner.</p> <p>The authors define the overall project environment as consisting of 3 major domains: 1) the Supplier domain which are the project based firms that supply human and material resources; 2) the temporary organisation or programme/project organisation that delivers the asset and 3) the owner domain of the investor organisation that charters the project.</p> <p>The article focuses on the capabilities that the project owning organisation and identifies 3 capability categories:</p> <ul style="list-style-type: none"> <li>1) Strategic capabilities (project selection, project mission definition, capital raising, stakeholder management and project portfolio managing)</li> <li>2) Commercial capabilities (packaging, contracting and relational)</li> <li>3) Governance capabilities (Assurance, project coordination and asset integration).</li> </ul> <p>The article suggests that Governance is the least researched area of project organising.</p> <p>They make the point that organisations typically find it hard to learn from projects citing (Brady and Davies, 2004) and that it's even more difficult for owning organisations whose core business is not project management.</p> <p>** they also point out that one of the most important element in front end loading and team integration is the presence of representatives from operations in the project team during project appraisal and technology selection.</p> <p><b>DC Note:</b> it's interesting that they don't also mention the presence of operational expertise during the production of project outputs and the utilisation of these outputs.</p>
Examining the role of transformational leadership of portfolio managers in	John Kissi, Andrew Dainty and Martin	IUPM	2013	The article focuses on the role of the portfolio manager who they say is a member of middle management and is responsible for achieving the business case for one or more projects.

### ONE WAY TO RECORD ARTICLE SUMMARIES...

- Once you have a good reference you should write a 100 – 150 word summary of the article.
  - Create a Word document with a table that has this structure
- It takes time for you to read, understand and integrate what you've read into your learning
  - So, start **now** and give yourself the best chance of doing well.

# INDUSTRY SOURCES

- When researching a specific topic or company you may find that there are some good industry sources that you wish to cite.
- That's ok but balance these citations with academic journals.
- You may find good content from government or NGO agencies but make sure they are well known and reputable. Be critical and only use content that you are comfortable defending if asked.
- Consulting firms such as McKinsey, BCG and others may also provide you with some good industry-based insights. Once again, make sure they are reputable.
- Do not cite generic web sites or content from small, unknown sources. You may need to defend these citations if you are queried by the person grading your submission and in the Oral Review assessment.
- The course Wattle site contains a link to SJR which can also help you find good quality technology sources.
- Under no circumstances cite Wikipedia. ☺



CIO



WIRED



The New York Times



McKinsey  
& Company

# ACADEMIC WRITING

- Your submission should present a **smooth progression of idea and arguments.**
- When you write a section apply the "**so what**" test i.e. What's the relevance of this section to the topic, why should the reader care?
- **You should create graphic(s) to support your paper.** Don't copy from external source - better to **create your own so you can demonstrate a depth of thinking** and your application of course concepts.
- **Make sure you read the brief carefully.** There's a lot of information included in the brief particularly around content and structure. Having said that, you are expected to work independently, think critically, be creative and find sources that add value.
- **Stay on topic.** Too often students write papers that are only loosely connected to the topic.
- **Read your paper out loud.** This is a good technique to make sure that your writing is clear and there's a smooth progression of ideas, analysis and findings throughout the paper. If it doesn't sound good, then it probably won't read well either.
- **Succinct and clear writing is good.** Sometimes it feels like students feel the need to be verbose to make their point. You don't! Being succinct helps you stay on topic and ensure that what you are writing is relevant.

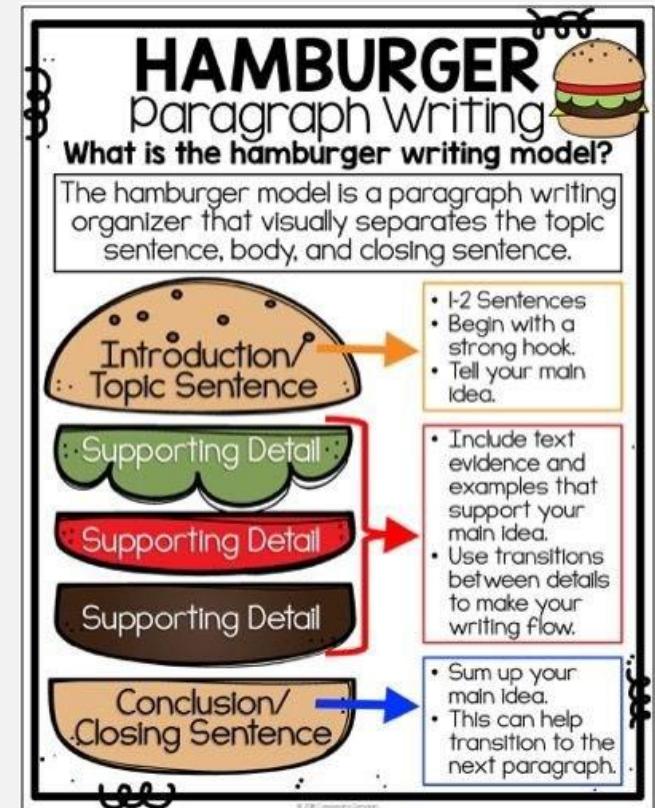


Image from:

[https://www.reddit.com/r/CollegeHomeworkTips/comments/jsevta/hamburger\\_paragraph\\_writing/](https://www.reddit.com/r/CollegeHomeworkTips/comments/jsevta/hamburger_paragraph_writing/)

Although the teaching team is not reviewing drafts, you can always talk to us about the approach and direction you are taking with your assessments.

# 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.*



# Business Strategy

- Developing and implementing a business strategy is key to deriving value from technology.
  - Without customers, revenue, profit and value – you don't have a business!!
  - Understanding the intent of the business strategy helps us identify areas where technology contributes the most.
  - There are many tools and frameworks that help senior management develop and communicate their business strategy.

**Question: Which comes first, Business or IS Strategy?**

Please note that in the course content, I use the terms Information Systems (IS) and Information Technology (IT) synonymously.

# 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?

internal resources  
external resources  
Organizations and ecosystems  
Acquisition and delivery  
Acquisition and delivery  
Acquisition of joint ventures and activities

### Key Activities



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

internal activities  
external activities  
"Starting the Job Done"  
Production  
Delivery  
Brand Status  
Price  
Cost Reduction  
Marketing  
Governance/Quality

### 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?

internal value propositions  
external value propositions  
examples:  
Personal  
Product  
Digital Marketing  
Platform/Network

### Customer Relationships



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

### Customer Segments



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

Mass Market  
Segmented  
Segmented  
Multi-value Platforms



### Key Resources



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

internal resources  
external resources  
Physical  
Human Capital (personnel, employees, staff)  
Information  
Financial

### 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?

internal channels  
external channels  
1. Awareness  
2. Information  
3. Persuasion  
4. Transaction  
5. After sales  
How are we working proactively on 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?

internal cost structure  
external cost structure  
Value Stream (based on value creation, process value proposition)

Fixed Costs (Indirects, rents, utilities)  
Variable Costs (Directs, labor, materials)  
Opportunity Costs (costs of capital)



### 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?

internal revenue streams  
external revenue streams  
examples:  
Asset sale  
Usage  
Subscription fees  
Licensing  
Freight  
Brokerage fees  
Advertising

internal revenue streams  
external revenue streams  
examples:  
List Price  
Product dependent  
Customer segment dependent  
Volume dependent  
Real-time Market



# THE AUSTRALIAN NATIONAL UNIVERSITY BUSINESS MODEL CANVAS

Key Partners <ul style="list-style-type: none"><li>• X</li></ul>	Key Activities <ul style="list-style-type: none"><li>• X</li></ul>	Value Propositions <ul style="list-style-type: none"><li>• X</li></ul>	Customer Relationships <ul style="list-style-type: none"><li>• X</li></ul>	Customer Segments <ul style="list-style-type: none"><li>• X</li></ul>
	Key Resources <ul style="list-style-type: none"><li>• X</li></ul>		Channels <ul style="list-style-type: none"><li>• X</li></ul>	
Cost Structure <ul style="list-style-type: none"><li>• X</li></ul>	Revenue Stream <ul style="list-style-type: none"><li>• X</li></ul>			

In Class Exercise – Take about 15 minutes and describe the BMC for ANU.

# THE COMPANY OF YOUR CHOICE

## BUSINESS MODEL CANVAS

Key Partners • X	Key Activities • X	Value Propositions • X	Customer Relationships • X	Customer Segments • X
	Key Resources • X		Channels • X	
Cost Structure • X	Revenue Stream • X			

In Class Exercise – Now take 20 minutes and do a more detailed version of the BMC that describes a company of your choice. Remember if you don't understand the business, what's the point of having information systems !!!

# There's significant overlap of Business and IT Strategies

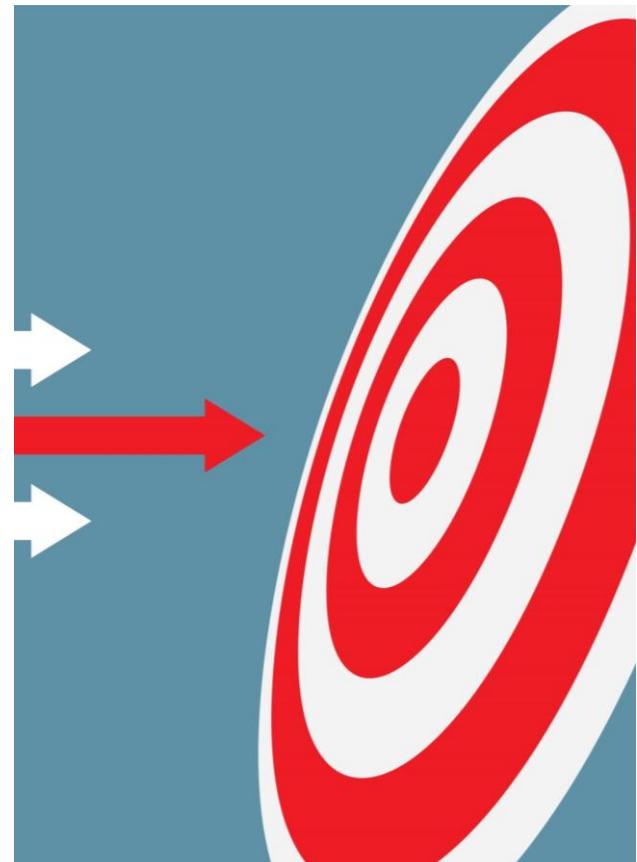
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**Already two decades ago:**

*"It's gotten to the point where it's almost impossible to distinguish between the business strategy and the IT strategy of any successful enterprise.*

*Approximately half of the investments that customers make in IT are now driven by line-of-business managers, not chief information officers."*

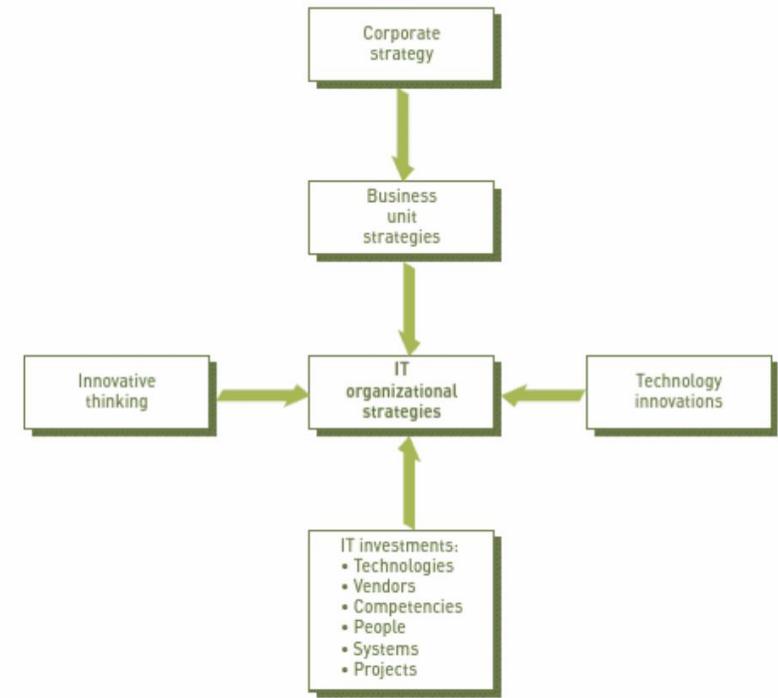
[Louis Gerstner, IBM chairman of the board, IBM Annual Report, 2001]



# The Information Systems Strategy

- The objective of the IS Strategy is to articulate the current state of technology, describe the future state and lay out the plan to move from current to future.
  - The IT Strategy must:
    - Improve management's understanding of IS opportunities and limitations
    - Assess current performance
    - Identify capacity and human resource requirements
    - Clarify the level of investment required
  - The articulation of how technology will support the organisation is based on long, medium and tactical plans.
  - Given the nature of technology and industries the long-term plan may only be 2 – 3 years in duration (or shorter).

Traditionally there's been a unilateral connection between Business and IS strategies



## **FIGURE 11.4**

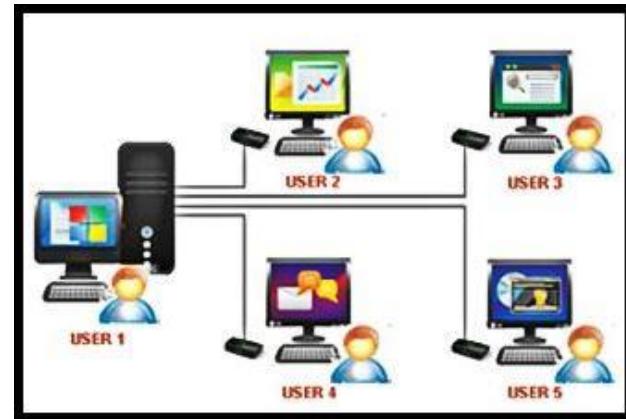
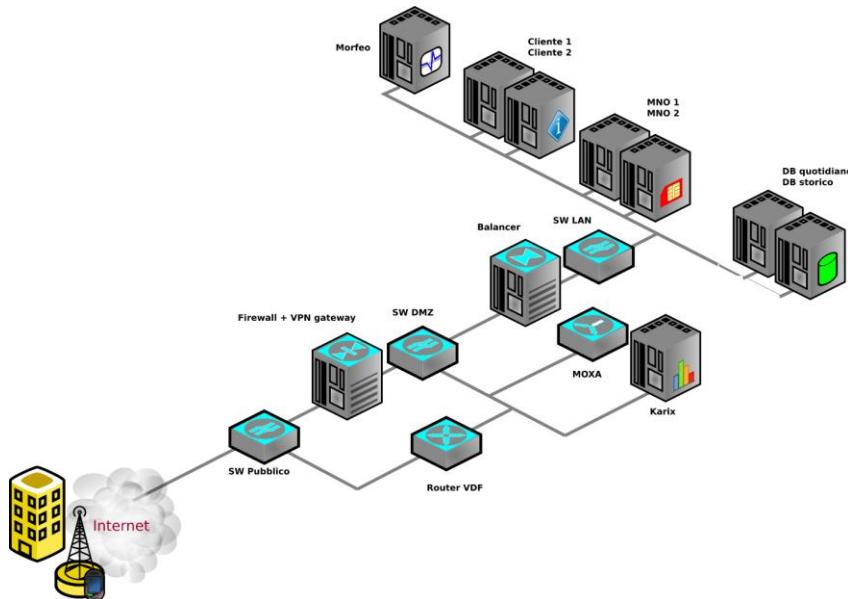
### Drivers that set IS organizational strategy and determine information system investments

Planners must consider many factors in setting IS organizational strategy.

Stair and Reynolds Figure 11.4

*Given the current nature of Information Systems – does this unilateral connection still make sense? Why?*

# The traditional Information Systems Strategy



[This Photo by Unknown Author is licensed under CC BY-SA-NC](#)

*The IS strategy focused internally on the capabilities of applications, servers, desktops, data storage, networks and connections to the outside world.*

**Little consideration of business strategy alignment and the possibility that technology needed to dictate strategic direction**

# The nature of the relationship between Business and IS organisations influences the nature of the IS Strategy

How is IS dept viewed?	Cost Center/Service Provider	Business Partner/Business Peer	Game Changer
Strategic planning focus IS goals	Inward looking  Reduce IS costs; improve IS services	Business focused  Control IS costs; expand IS services	Outward looking  Make IS investments to deliver new products and services
Strategy	React to strategic plans of business units	Execute IS projects to support plans of business	Use IS to achieve competitive advantage
Typical projects	Eliminate redundant or ineffective IS services	Implement corporate database and/or enterprise systems	Provide new ways for customers to interact with organization

Stair and Reynolds Table 11.5

How do you think Information Systems is viewed in these companies i.e. which category from the above table do they fall into?

**coles**

**NETFLIX**

**Meta**

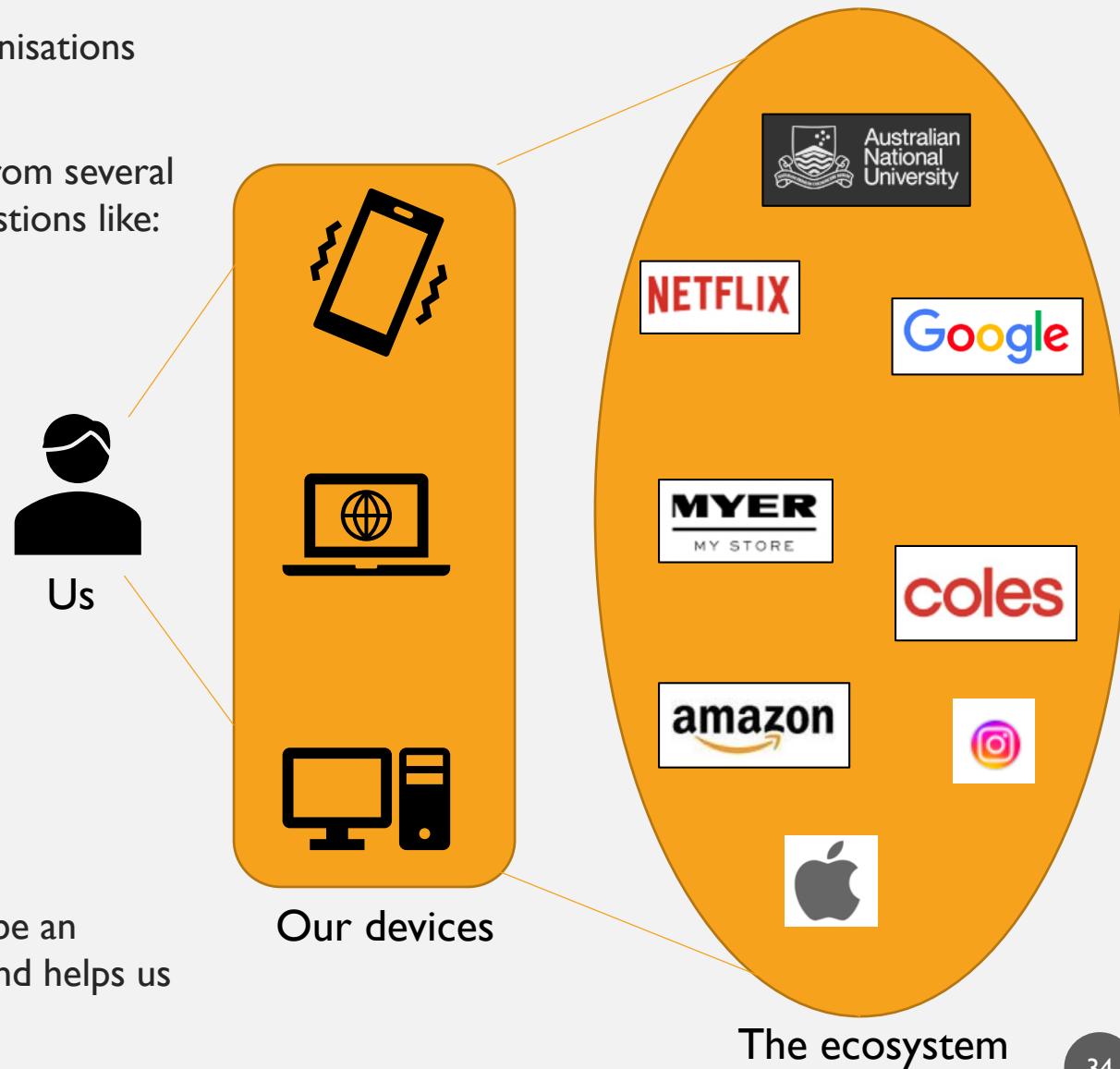


**So how do organisations make sure they are getting the most out of their technology?**

**Systems modelling is a technique that helps organisations describe and better understand their information systems...**

# THE VALUE OF SYSTEMS MODELLING

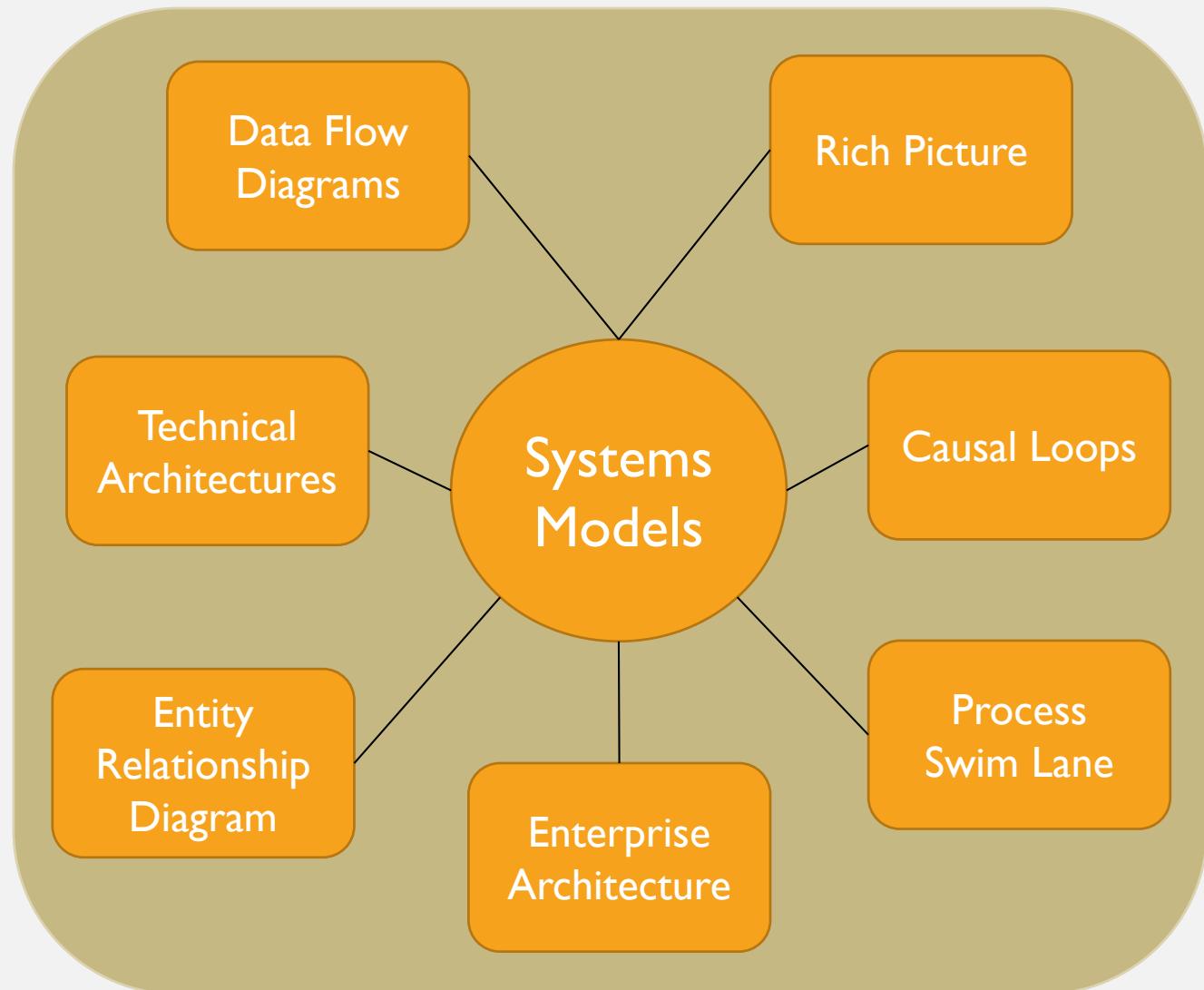
- We want to understand how organisations use information systems.
- We look at information systems from several different perspectives and ask questions like:
  - How does technology fit within the organisation? Is this understood within the organisation?
  - Is the organisation deriving business value from its technology?
  - Does technology align with the organisation's business strategy?
  - How does technology support its operating environment?
  - Is technology being managed effectively and efficiently?
- Systems modelling helps us describe an organisation's use of technology and helps us answer these questions.



# SYSTEMS MODELLING

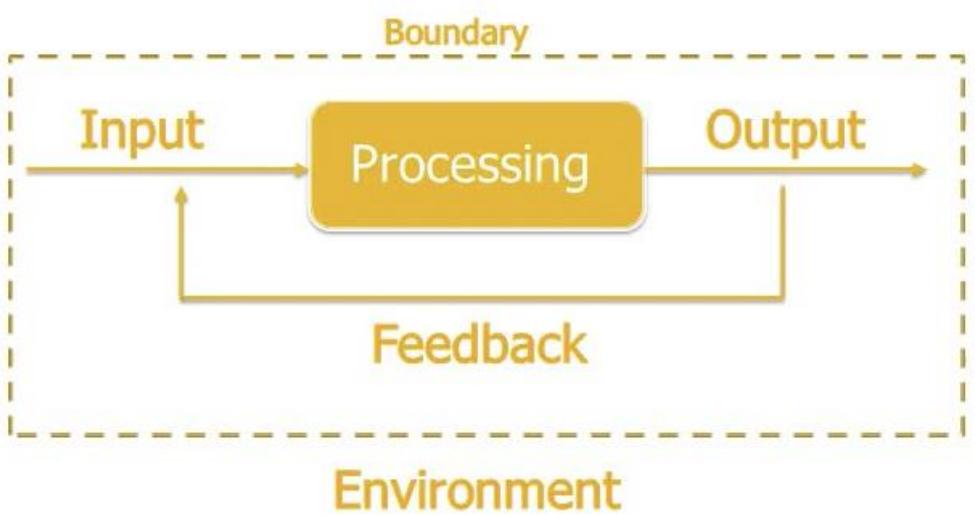
## LOTS OF MODELS TO CHOOSE FROM

- There are many models that we can use to describe a system.
- The models focus at various levels of detail ranging from a macro level to low level technical details.
- The models can be used to communicate with executive management
- Also useful for the basis of detailed, technical conversations.



Even if you're not an IT person, understanding how to use some of these models enables you to have informed conversations with your IT colleagues.

# The general systems model is simple but a powerful foundation



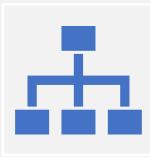
For example: Apply the general systems model to the completion of an INFS1001 assignment.

1. What are the inputs?
2. What is the output?
3. How can we use the feedback loop?
4. What are the critical success factors that influence this system model?

- In this course we're exploring how system models describe business and personal experiences.
- Our goal is to understand how systems work and communicate its intent/operation to others.
- The general systems model describes a simple system where we process an input to create an output with the ability to learn and take further actions based on a feedback loop.
- Systems operate within some form of context, so we recognise that our entire system is encased in an environment with its own set of conditions and expectations.

# SYSTEMS MODELLING

## SOLVING BUSINESS PROBLEMS IS OFTEN A KEY CHALLENGE REQUIRING IT DEPARTMENT PARTICIPATION



In collaboration with the business areas, the IT organisation is often called upon to participate in finding solutions for complex business problems.



If this isn't the case, then it's likely that the divide between business and IT is significant and the Business/IT partnership isn't what it needs to be.



Collaborative problem solving requires participants to have a consistent and common understanding of the problem and potential solutions.



Establishing an environment where this is true can often be done by applying a Systems Thinking approach where a familiar task is explored and documented.

Tom Wujec | TEDGlobal 2013  
**Got a wicked problem? First, tell me how you make toast**

### An Exercise in SYSTEMS THINKING

Three small white boxes on a red gradient background, each containing a line drawing of a slice of bread. The first box shows a single slice, the second shows two slices, and the third shows three slices, illustrating the progression of a task.

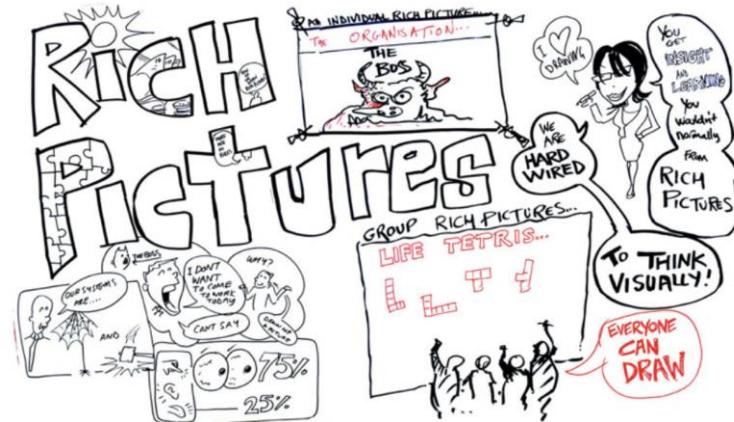
[How do you make toast](#)

This exercise takes the familiar task of making toast to establish a team environment where everyone understands what has to be done but then learns how to work with others to describe a task and, ultimately, solve a common problem.

**How have you worked with people to get them on the “same page”?**

# SYSTEMS MODELLING THE RICH PICTURE

- 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.

## SYSTEMS MODELLING (RICH PICTURE)

### 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 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 and provides a Multiview description of the system.
- 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 system supporting a bus company.
- Note that from this model we identify the major actors, their objectives, technology and the information flow across the system.

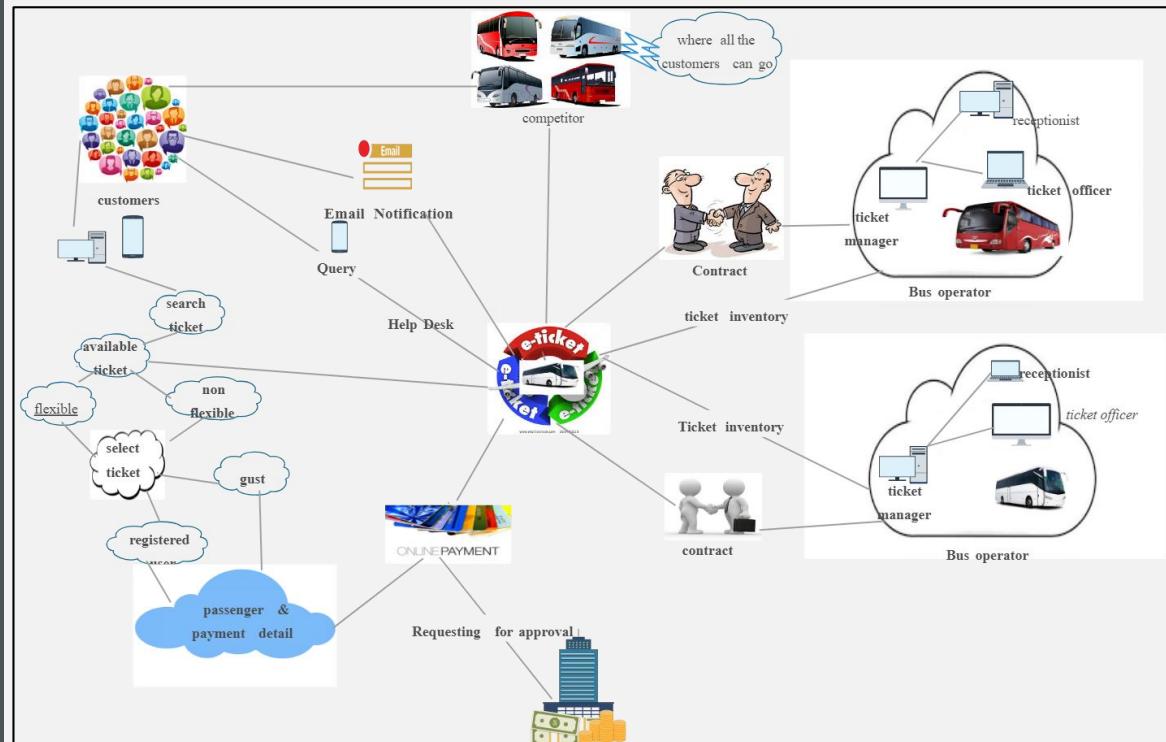
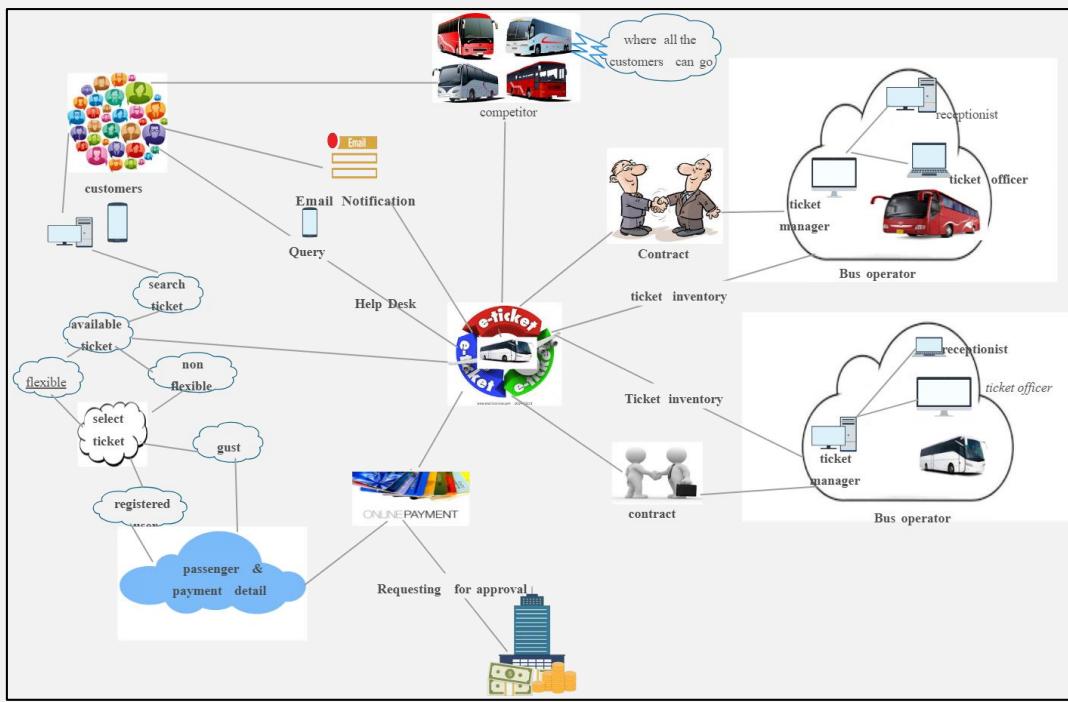


Image Credit: <https://creately.com/diagram/example/iesegfdx1/rich-picture-classic>



## SYSTEMS MODELLING

- 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?

## THE RICH PICTURE EXAMPLE

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.

# SYSTEMS MODELLING

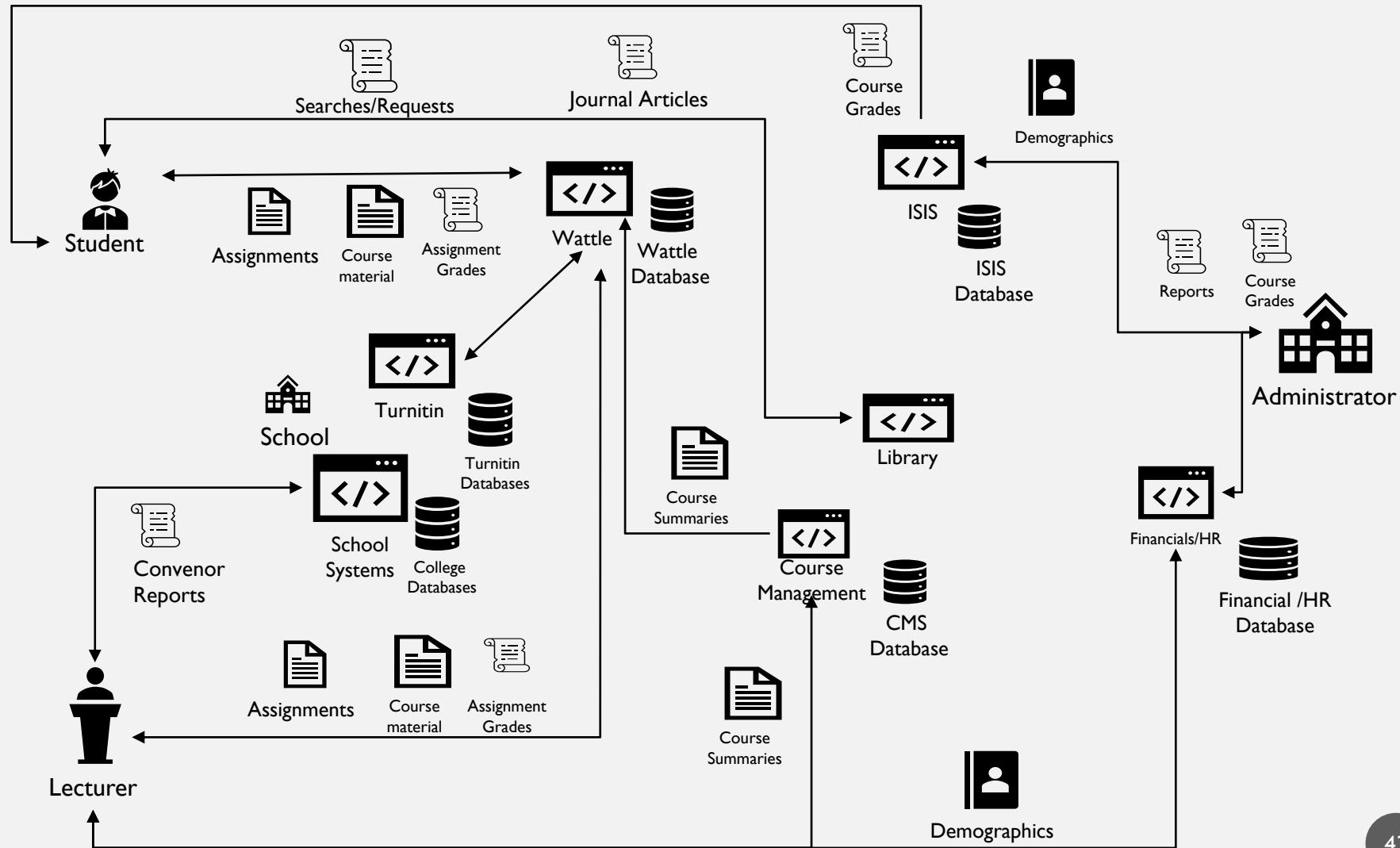
## RICH PICTURE EXAMPLE

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

Actors	Technology	Information
 Student	 Wattle	 Demographics
 Lecturer	 Library	 Course summaries
 Administrator	 ISIS	 Course material
 Schools	 Course Management	 Journal Articles
	 Financial/HR	 Reports
	 Turnitin	 Course Grades
	 College Systems	 Assignments
	 Devices	 Assignment Grades

# SYSTEMS MODELLING – ANU RICH PICTURE EXAMPLE

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



# WEEK 1 – WRAP UP

- In Week 1, we covered the following:
  - ✓ Course overview
  - ✓ Assessment overview
  - ✓ Business Strategy
  - ✓ Business model canvas (BMC)
  - ✓ Information Systems Strategy
  - ✓ Systems modelling –
    - ✓ General Systems Model
    - ✓ Making toast
    - ✓ Rich picture
- Make sure you are in a tutorial group
- Make sure you review the BAR brief and spreadsheet!! If you are not in the spreadsheet you must tell me asap. Its your responsibility to make sure you know your assigned statement.
- See you next week !!