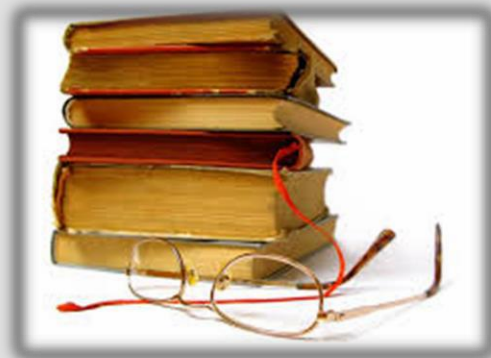# Module 3: Class 6

Analytics Capability as Competitive Advantage (Part 1)

Assignment 2 Part A (Video Presentation)
Seminar in Week 8 (after the break)

- Bring a USB drive with your video file to your scheduled seminar.

- And upload the video file or link to CloudDeakin Assignment 2 Dropbox.

- There is NO predefined presentation schedule.

- When you group is ready, please raise your hand.

- If no one volunteers, the tutor will randomly choose a group.

- Due to the high enrolment number, it is likely that some groups will present in Week 9.

Assignment 2 Presentations

Any Questions? Please use the discussion forum for Assignment 2.
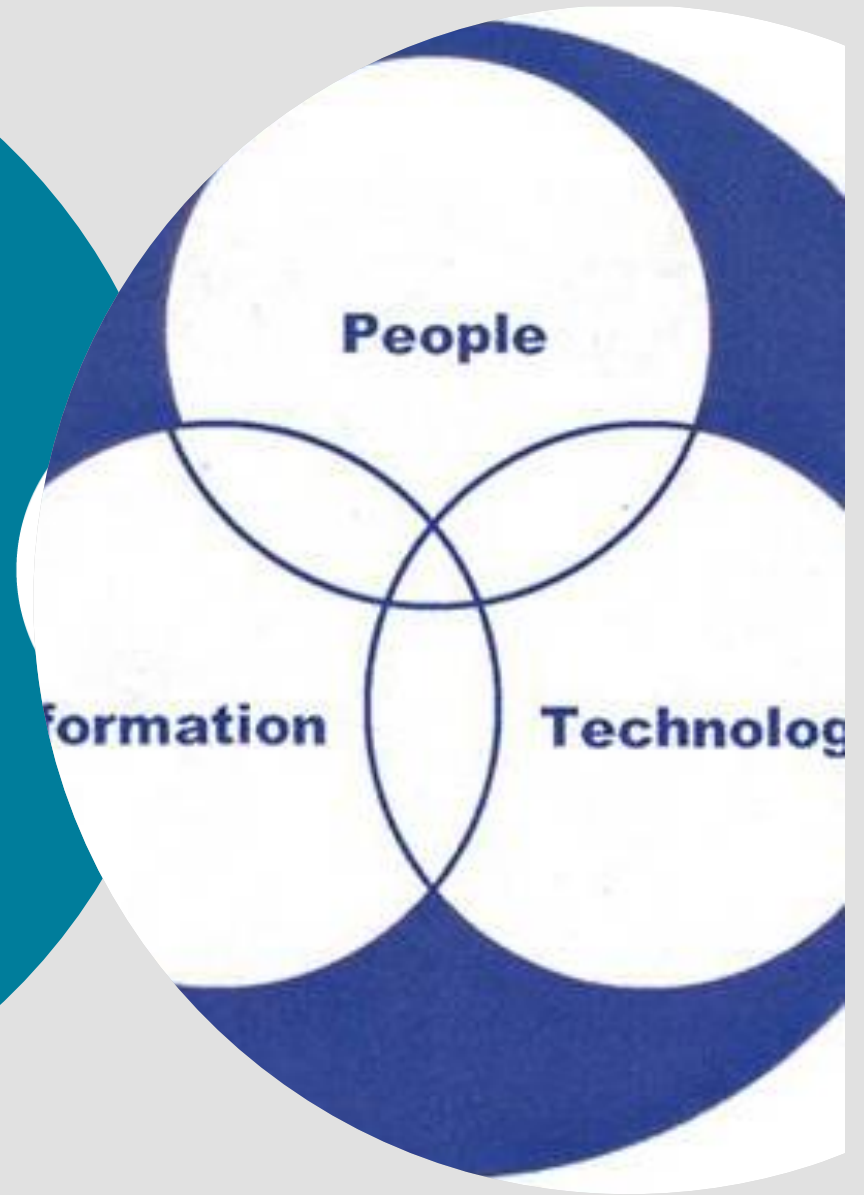
MIS782: Value of Information

Firms need to understand:

How to gain competitive advantage based on their underlying resources.	How competitive advantage from business and how emerging IT opportunities, such as data analytics, can generate business value from investments in these areas.	Analyse how organisations adapt to changes or disruptors in the technology landscape to preserve and sustain an advantage.

In this unit, we will discuss:

Module One + Two	Module Three + Four	Module Five
1. Business Value Returns from IT Investments 2. IT Portfolio Theory 3. Analysing competitive advantage - RBV 4. Analysing competitive advantage - VRIO	5. Business Case Development 6. Analytics as a capability - I 7. Analytics as a capability - II: From business data to business insight 8. Emerging sources and SMA	**9. Dynamic capabilities through Information Asymmetries** 10. Competing on Information Asymmetries

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Recap – Resource Based View

- The RBV: a basis for a firm's competitive advantage lies primarily in the application of tangible and/or intangible resources and capabilities.

- Resources:
  - Tangible
  - Intangible

- Four dimensions of capabilities:
  - Skills and knowledge
  - Technical systems
  - Managerial systems
  - Values and norms

How does information and analytics fit in?

Recap – VRIO Framework
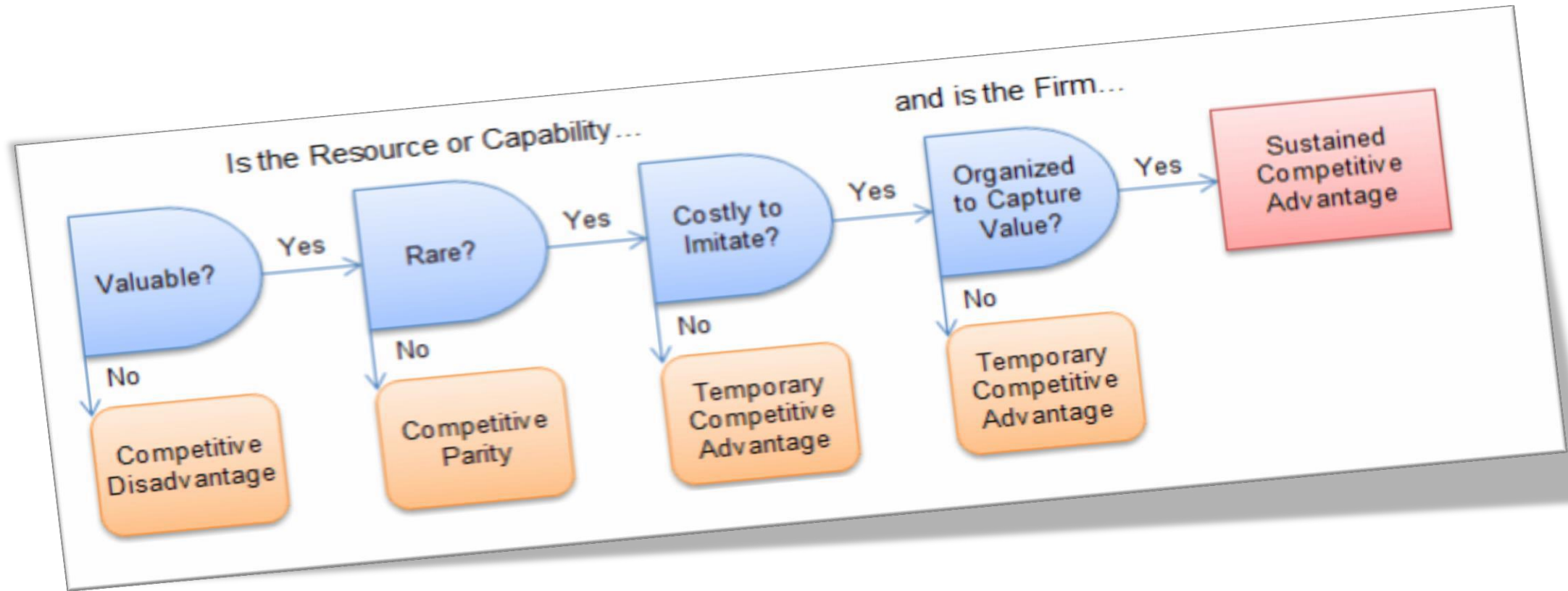
How does information collected or analytics performed fit in the VRIO framework?

What do These Businesses Have in Common?

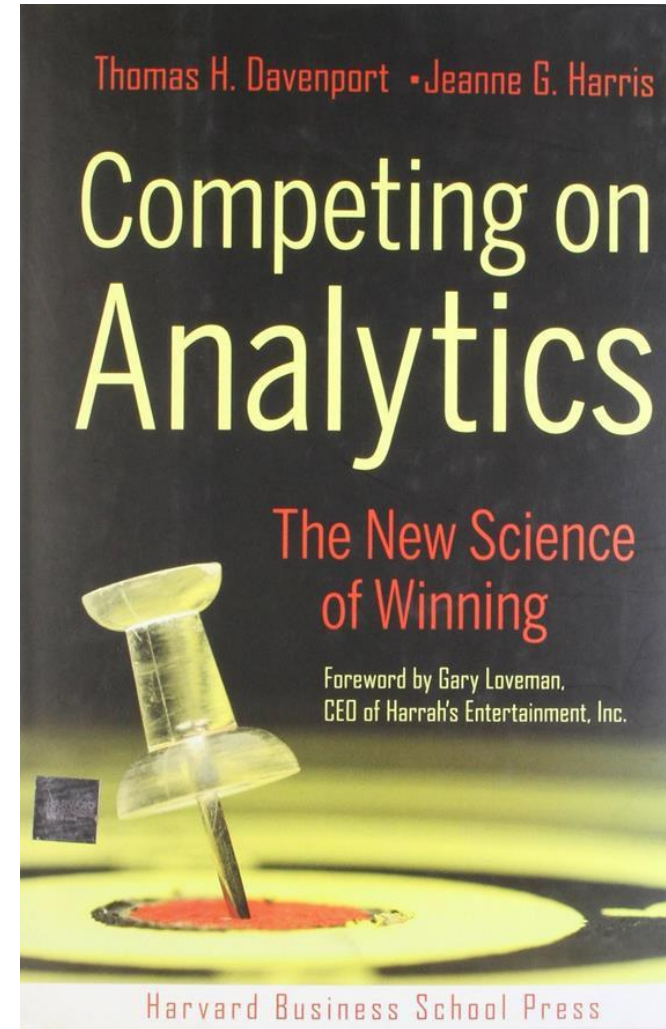# Answer: Information as a Resource

➡️Focus of this class

➡️Netflix & data analytics:

https://www.youtube.com/watch?v=PIXbwxqLCJw

Answer: Business analytics as a competitive capability

➡ Using the information resource to steer your decision making

➡ Focus of subsequent class

Information as a Resource

Constraints of capturing information
- 3 Antecedent Conditions (3R's)

Value of Information
- 4 Value Dimensions

3 Antecedent Conditions (the 3 R's)

Reliable

Is the data precise and consistent?

Relevant

Are we measuring the right variables? *(internal validity)*

Representative

Do our data adequate represent the overall population? *(external validity)*

Playing Darts to Understand 3 R's

3 Antecedent Conditions (the 3 R's)

1: Reliable

- Is the data precise and consistent?

Darts are all over the place: **unreliable**

Darts hit the same area: **reliable**

3 Antecedent Conditions (the 3 R's)

2: Relevant

- Are we measuring the right variables? (internal validity)

Darts not near the target:
irrelevant

Darts are in the target area:
relevant

3 Antecedent Conditions (the 3 R's)

3: Representative

▶ Do our data adequate represent the overall population? (external validity)

Darts are reliable and valid…

However, there are other dashboards…

Questions

- Is having information sufficient to get a competitive advantage?

- Is the information valuable, rare and inimitable?

Information as a Resource

Constraints of capturing information
- 3 Antecedent Conditions (3R's)

Value of information
- **4 Value Dimensions**

Dimensions of Information Value

- Four dimensions of information value:
  - Depth - Having access to <u>more detailed information</u> than your competitors
  - Breadth - Having access to <u>greater volumes of information</u> than competitors
  - Scope - Information that provides a more <u>holistic perspective</u>
  - Time - Having access to information <u>sooner or more often</u>

- What do we mean by each of these?

- Can you give examples of each type of value?

Source: Scheepers and Seddon (2014)

Let's Explore the Forest with Depth

Information Value: Depth

- Having access to <u>more detailed information</u> than your competitors

Person 1:

That's a tree

Person 2:

This is a willow tree. I can tell because of the elongated leaves and the slender branches.

Questions

What information related to the 'depth of transactions' that Coles/Woolworths are not capturing?

How does depth of information help your business?

Back to the Forest for Breadth

Information Value: Breadth

- Having access to <u>greater volumes of information</u> than competitors
- This value dimension could be understood as the 'Volume'

Person 1:

To learn about trees, I'll look at this small area!

Person 2:

To learn about trees, I'll look at this whole area!

Back to the Forest for Scope

Information Value: Scope

- Information that provides a more <u>holistic perspective</u>
  - Using information from various sources to make sense of a broader phenomenon
  - This dimension can be understood as *the level of integration* of information

Person 1:

I'm checking the health of the forest by looking at the trees' leaves

Person 2:

I'm checking the health of the forest by looking at the trees' leaves and branches, the insect and bird populations, in the context of what season it is
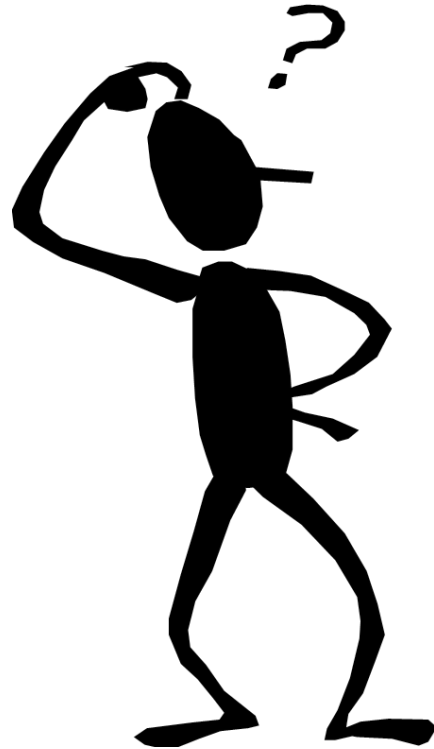
Information Value: Scope

An HR manager might use information from LinkedIn, Facebook and Twitter (X) to know a candidate

- Building a candidate's picture aside from his/her CV and references
  - Gaining insight into professional and personal life

Question

What is the difference between scope and breadth of information?

Breadth versus Scope

➡ Breadth

Seeing more trees than the others

➡ Scope

Seeing not only the trees, but the birds and insects and weather, all of which can influence the growth and health of each tree

Back to the Forest: Time

Information Value: time

- Having access to information <u>sooner or more often</u>

Not being aware in time

Timely response

Example: When introducing a new coffee product

- Concern: do customer find the taste too strong?
- Action: monitor blogs, twitter, for customer reactions
- Finding: new brew is *too expensive*
- Response: lower the price by next morning

Example: Recommendations appear when visiting the website

- Click-through data
- Availability and profitability of various products
- Shopper purchasing history

- Market-basket analysis (customer segmentation)
- Recommendation engines

Next Class

Next class – *we look at:*
- *What happens to analytics capability over time?*