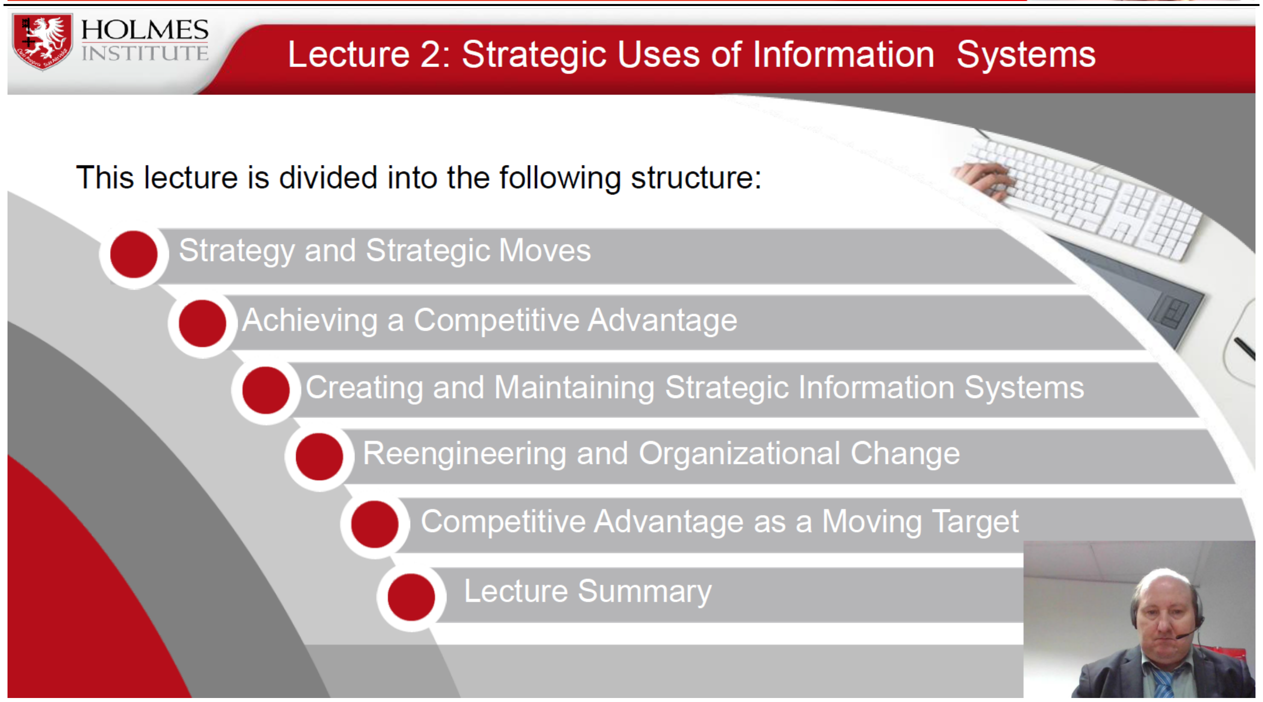
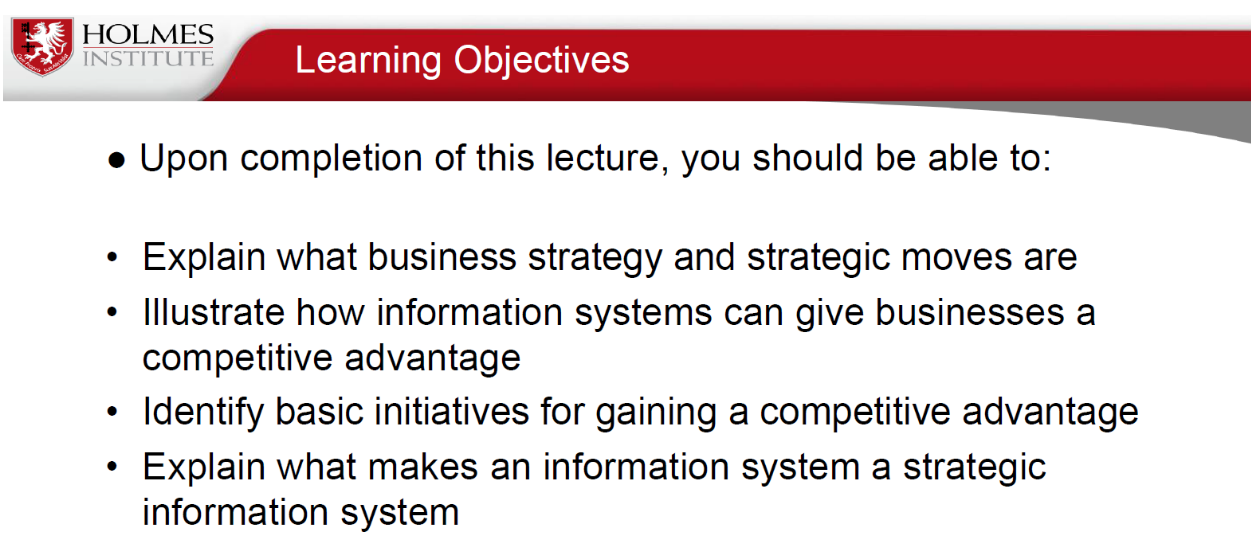




This slide aims to enable students to understand key concepts such as business strategy, the role of information systems in gaining a competitive advantage, basic initiatives for achieving this advantage, and the characteristics of strategic information systems; for example, in Australia, a retail company like Woolworths employs a business strategy of offering a wide range of products and uses information systems for inventory management, online shopping, and customer loyalty programs to gain a competitive edge, demonstrating the practical application of these concepts in the local market.

Strategy and Strategic Moves

- Strategy: framework, or approach, to obtaining an advantageous position
- Business strategy: a plan to help an organization outperform its competitors
  - Often done by creating new opportunities, not beating rivals
- Information system may be built to solve a problem or to seize an opportunity

This slide defines strategy as an advantageous approach, explains business strategy as a plan for outperforming competitors through creating new opportunities, and highlights that information systems can be developed to address problems or exploit opportunities; for instance, in Australia, Qantas Airways adopts a business strategy of frequent flyer programs and uses information systems for customer data analysis to seize the opportunity of personalized marketing and increased customer loyalty rather than merely competing on ticket prices.

Strategy and Strategic Moves (cont'd.)

- **Strategic information system (SIS)**: an information system that helps seize opportunities
- **Strategic advantage**: using strategy to maximize a company's strengths
- **Competitive advantage**: having maximized an organization's strengths to beat its rivals
- Innovative companies battle to create “got-to-have-it” technology
  - Example: mobile payment technology

This slide defines a Strategic Information System (SIS) as one that seizes opportunities, highlights "Strategic Advantage" as maximizing a company's strengths, "Competitive Advantage" as using these strengths to beat rivals, and provides an example in Australia where innovative companies like Afterpay battle to create "must-have" technology such as mobile payment solutions.

Achieving a Competitive Advantage

- Competitive advantage is achieved when a for-profit company increases its profits significantly, usually through increased market share
- Many initiatives can be used to gain competitive advantage
  - Strategic moves often combine two or more initiatives
- The essence of strategy is innovation — something no one has tried before

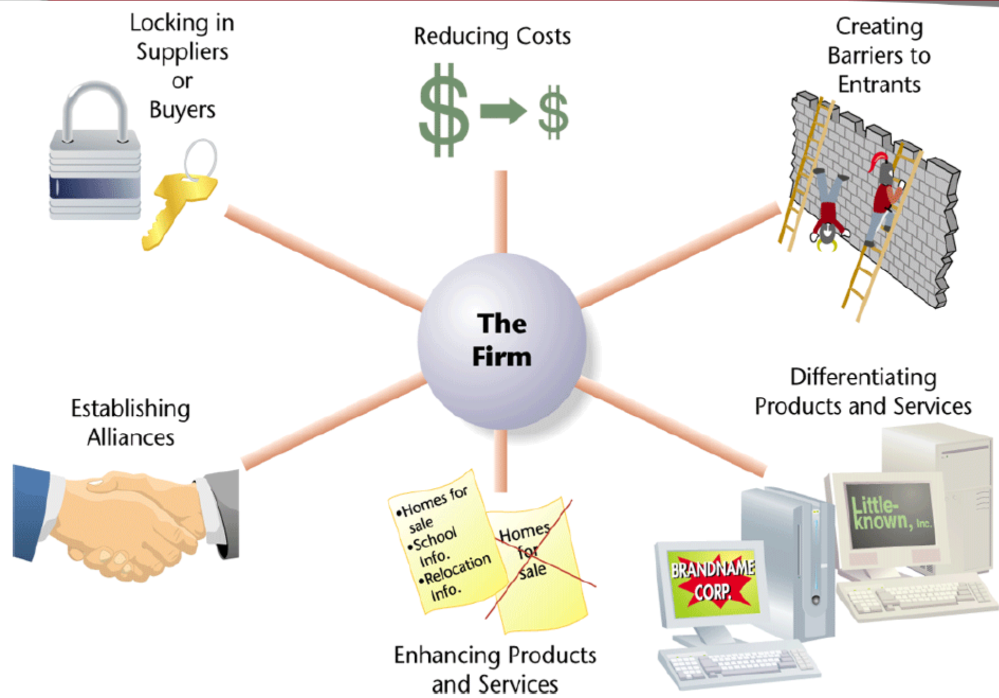
This slide states that competitive advantage involves significantly increasing profits, often through increased market share, can be achieved through various initiatives, including combining multiple strategic moves, and emphasizes that innovation, exemplified by companies like Atlassian in Australia, is at the core of successful strategies.

Achieving a Competitive Advantage

- Eight ways to gain competitive advantage
  - Reduce costs
  - Raise barriers to market entrants
  - Establish high switching costs
  - Create new products or services
  - Differentiate products or services
  - Enhance products or services
  - Establish alliances
  - Lock in suppliers or buyers

This slide outlines eight strategies for gaining competitive advantage, including reducing costs (e.g., Aldi's cost-effective grocery model in Australia), raising barriers to market entrants (e.g., regulatory hurdles for telecom providers), establishing high switching costs (e.g., loyalty programs in the airline industry), creating new products or services (e.g., Atlassian's innovative software products), differentiating products or services (e.g., luxury car brands like BMW), enhancing products or services (e.g., Apple's continuous iPhone improvements), establishing alliances (e.g., Qantas' partnership with Emirates), and locking in suppliers or buyers (e.g., long-term contracts with mining companies in Australia).

Achieving a Competitive Advantage



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Reduce Costs

- Customers want to pay as little as possible for products or services
- **Reduce costs** to lower price
- Automation increases productivity → greatly reduces manufacturing costs
- Web can automate customer service activities
- Companies that are first to adopt advanced systems that reduce labor enjoy competitive advantage until their rivals do likewise

This slide emphasizes the importance of reducing costs to lower prices for customers, and in practical examples in Australia, companies like Kogan.com have leveraged e-commerce and automation to reduce operational costs and offer competitive prices to customers, while early adopters of advanced manufacturing technologies like BlueScope Steel gained a competitive advantage until their competitors caught up.

Raise Barriers to Market Entrants

- Less competition is better for a company
- Gain competitive advantage by making it difficult or impossible for others to produce the same product or service
- To lower competition, raise barriers to entrants
  - Obtain legal protection of intellectual property (copyrights and patents on inventions, techniques, and services)
  - Examples: Amazon's one-click, Priceline's online reverse auction

This slide underscores the importance of reducing competition by raising barriers to entry, exemplified by companies like Amazon, which secured a patent for its "one-click" ordering system, and Priceline, known for its patented online reverse auction model, both making it difficult for others to replicate their services in Australia.

Raise Barriers to Market Entrants (cont'd.)

- Utilize expensive information systems that are unaffordable to others
  - Example: airline industries

This slide highlights the strategy of utilizing expensive information systems, as seen in the airline industry in Australia, where advanced reservation and ticketing systems are employed, making it unaffordable for others to replicate the same level of service.

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Establish High Switching Costs

- **Switching costs**: expenses incurred when customer stops buying from one company and starts buying from another
  - Explicit: charge customer for switching (early termination of contract)
  - Implicit: indirect costs over period of time, such as implementation of new product, staff retraining
- High switching costs lock in customers
  - Example: proprietary software, such as ERP systems, that have custom modifications

This slide discusses switching costs, both explicit and implicit, and how high switching costs can lock in customers, such as in the case of proprietary software like ERP systems with custom modifications in use by various Australian companies.

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Create New Products or Services

- Having a unique product or service gives competitive advantage for a period of time
- **First mover**: organization that is first to offer a new product or service
  - Usually results in superior brand name, better technology, more experience, or critical mass
- **Critical mass**: body of clients that is large enough to attract other clients
- Examples: eBay, Apple's iPhone, Facebook, Twitter, ar YouTube

This slide emphasizes the advantage of being a first mover, where the organization that introduces a new product or service first gains a competitive edge due to factors like a superior brand name, better technology, more experience, or critical mass, as seen in the cases of eBay, Apple's iPhone, Facebook, Twitter, and YouTube in Australia.

Create New Products or Services (cont'd.)

- Being a first mover is not a guarantee of long-term success
  - Netscape
  - Infoseek
- Must continue to improve and innovate to maintain competitive advantage

Being a first mover doesn't guarantee long-term success, as demonstrated by Netscape and Infoseek, indicating that organizations must consistently improve and innovate to sustain their competitive advantage, a lesson applicable to companies like Google and Amazon in Australia.

Differentiate Products or Services

- Product **differentiation**: persuading customers that your product is better than competitors'
  - Usually achieved through advertising and customer experience
  - Exemplified by brand name success
- Examples: Skype, Levi's jeans, Chanel and Lucky perfumes, and Gap clothes

Product differentiation is about convincing customers that your product is superior to competitors', often through advertising and customer experience, as seen with brands like Skype, Levi's jeans, Chanel perfumes, and Gap clothing in Australia.

Enhance Products or Services

- **Enhance existing products or services** to increase value to consumer
- Many products and services have been enhanced by use of the Web
  - Examples: Charles Schwab and Progressive Casualty Insurance Company

Enhancing existing products or services to increase consumer value is exemplified by companies like Charles Schwab and Progressive Casualty Insurance Company in Australia, which have leveraged the web to improve their offerings.

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Establish Alliances

- **Alliance**: two companies combining services
  - Makes product more attractive
  - Reduces costs
  - Provides one-stop shopping
- **Affiliate program**: linking to other companies and rewarding the linker for click-throughs

In Australia, alliances between companies, such as Qantas and Emirates in the airline industry, can make products more attractive, reduce costs, and offer one-stop shopping, while affiliate programs, like those utilized by e-commerce websites and online retailers, link to other companies and reward the linker for click-throughs.

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Establish Alliances

Lock in Suppliers or Buyers

- Accomplished by achieving bargaining power
- Bargaining power: leverage to influence buyers and suppliers
  - Achieved by being major competitor or eliminating competitors
  - Uses purchase volume as leverage over suppliers
- Lock in buyers by making them fear high switching costs

In Australia, companies can achieve competitive advantage by leveraging their bargaining power, often through purchase volume, to influence buyers and suppliers, as seen with major supermarket chains like Coles and Woolworths, which use their market dominance to negotiate favorable terms with both suppliers and customers, making it difficult for competitors to enter the market or for customers to switch to other options.

Lock in Suppliers or Buyers (cont'd.)

- Lock in clients by:
  - Giving away a product to **create a standard** (Microsoft's Internet Explorer, Adobe's Acrobat Reader, and Adobe's Flash player)
  - Creating a physical or software limitation on using technology (Apple Computer's iTunes)

In Australia, companies can lock in clients by establishing a standard through free product distribution, as seen with Microsoft's Internet Explorer becoming the default web browser for many Windows users, or by imposing limitations on technology usage, as exemplified by Apple Computer's iTunes ecosystem, where users are encouraged to purchase content from the iTunes Store and use Apple devices for seamless integration and access to their media libraries.

Creating and Maintaining Strategic Information Systems

- Many opportunities to accomplish competitive edge with information technology
- Innovative software can establish a competitive advantage
- Strategic information systems can be created from scratch, by modifying a previous system, or through "discovery" of existing capabilities

In Australia, organizations have numerous opportunities to gain a competitive edge through information technology, with innovative software like Canva's design platform establishing a competitive advantage in the graphic design industry, and strategic information systems can be developed either from scratch, by enhancing existing systems, or by discovering untapped capabilities within current technology infrastructures.

Creating and Maintaining Strategic Information Systems

- To be an SIS, an information system must:
  - Serve an organization goal
  - Collaborate with other functional units of company

In Australia, an SIS (Strategic Information System) must align with an organization's objectives and work collaboratively with other functional units, as seen in the integration of cloud-based customer relationship management (CRM) software like Salesforce into various departments of businesses to enhance customer interactions and support overall organizational goals.

Creating an Strategic Information System

- Top management must be involved throughout the process
- Strategic information system must be part of the overall organizational strategic plan
- Management should ask questions to determine whether to develop a new SIS
- Estimating the financial benefits of SIS is extremely difficult
  - Many fundamental business changes may be involved

In Australia, successful implementation of a Strategic Information System (SIS) requires active involvement of top management and integration into the organization's overall strategic plan, exemplified by banks like Commonwealth Bank of Australia incorporating digital banking platforms into their strategic plans under top management guidance. Additionally, decision-makers should assess the need for a new SIS by asking pertinent questions, and estimating the financial benefits of an SIS can be complex due to the potential for significant business process changes, as seen in healthcare organizations adopting electronic health record systems to align with strategic objectives and facing challenges in quantifying the financial impact.

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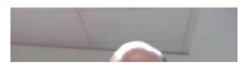
Questions to answer in a strategic information system process

1. What would be the most effective way to gain an advantage?
2. Would more accessible or timely information to our employees, customers, or suppliers help establish a significant advantage? If so, how?
3. Can an information system be developed that provides more accessible and timely information?
4. Will the development effort be economically justified?
   - Can existing competitors afford to fund the development of a similar system?
   - How long will it take the competitors to build their own, similar system?
   - Can we make our system a moving target to the competition by constantly enhancing it, so that it always retains its superiority?
5. What is the risk of not developing such a system?
6. Are alternative means of achieving the same goals available, and if so, how do they compare with the advantages and disadvantages of a new SIS?
7. Will technology add value to the customer's experience? If so, how?



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Reengineering and Organizational Change

- To implement SIS, organizations must rethink the way they operate
- **Reengineering**: eliminating and rebuilding operations from the ground up
  - Often involves new machinery and elimination of management layers
  - Frequently involves information technology
  - Goal is to achieve huge efficiency improvements
- New SIS requires revamping business processes

In Australia, organizations implementing Strategic Information Systems (SIS) must undergo business process reengineering, exemplified by Qantas Airways reevaluating and restructuring its booking and ticketing processes to improve efficiency through digital transformation, which often involves incorporating new technology and streamlining operations, leading to substantial efficiency gains.

Competitive Advantage as a Moving Target

- Competitive advantage is often short-lived
- Competitors soon imitate the leader, diminishing the advantage
- Increased IT availability
  - SIS quickly becomes a standard business practice
- Must continually modify and enhance technology to sustain competitive advantage

In Australia, competitive advantages gained through Strategic Information Systems (SIS), like Woolworths implementing an advanced supply chain management system, can be short-lived as competitors quickly adopt similar technology, necessitating continuous modification and enhancement to maintain a lead in the market.

JetBlue: A Success Story

- JetBlue: airline company that entered a formerly hurting market with great success
  - Ticketless travel
  - Automation with IT
  - Reduced costs
  - Improved service

JetBlue, an airline operating in Australia, successfully entered a previously struggling market by introducing innovative features like ticketless travel, automation through IT systems, cost reduction, and improved customer service, helping the company thrive.

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Massive Automation

- JetBlue developed Open Skies software to automate ticket handling
  - Avoids travel agents and their fees
  - Uses reservation agents who work from home using VoIP
  - Encourages Internet flight booking by customers
- Maintenance information system used to log airplane parts and time cycles for replacement

JetBlue in Australia implemented the Open Skies software to automate ticket handling, reducing reliance on travel agents and encouraging online bookings, while also employing a maintenance information system to track airplane parts and their replacement cycles, improving operational efficiency and cost savings.

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Massive Automation (cont'd.)

- Flight planning to maximize occupied seats is automated
- Operational data is updated flight by flight and available to management at all times
- Training management system eliminates need for paper records, allows tracking of employee training

JetBlue in Australia automated flight planning to optimize seat occupancy, maintained real-time operational data accessible to management, and implemented a training management system to replace paper records and track employee training, enhancing operational efficiency and customer service.

Away from Tradition

- JetBlue used innovative technique for routing airplanes
  - Does not use hub-and-spokes method, only point to point
  - Take most profitable route between cities
- Keeping flight manuals on laptop computers allows for paperless cockpits
  - Saves preflight time associated with calculating weight of plane (annual savings of ~4800 hours)

JetBlue in Australia implemented an innovative point-to-point routing system, avoiding the traditional hub-and-spokes method, to optimize flight profitability, and adopting paperless cockpits with flight manuals stored on laptop computers, saving approximately 4,800 hours of preflight time annually.

Enhanced Service

- Technology helps JetBlue offer better service
  - Leather seats
  - Real-time in-flight television
  - On-schedule departures and arrivals
  - Fewest mishandled bags in the industry
  - Rapid check-in times and fast baggage retrieval
  - Lowest or next to lowest cost per available seat-mile (CASM) in first three years of operation

JetBlue in Australia utilizes technology to provide superior service, offering leather seats, real-time in-flight television, on-schedule departures and arrivals, low mishandled bag rates, rapid check-in times, fast baggage retrieval, and one of the lowest costs per available seat mile (CASM) in its first three years of operation.

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The Bleeding Edge

- Ford case shows that being a first mover is risky
- Pioneers sometimes get burned even with careful planning
- **Bleeding edge**: failure occurring when a company attempts to be on leading edge of new technology
  - No prior experience from which to learn
  - Implementation costs are greater than anticipated
  - Technology ends up losing money for company

Ford's early foray into electric vehicles in Australia illustrates the risks of being a first mover, as they encountered difficulties such as higher implementation costs and unanticipated challenges in an emerging technology market, highlighting the concept of "bleeding edge" where pioneering efforts can result in financial setbacks due to a lack of prior experience and underestimated costs.

Created by Dr. Farshid Keivanian