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Facilitator guide

Unit code: BSBSMB412

Unit name: Introduce Cloud Computing into Business Operations

Delivery date: Semester 2, 2019

**TAFE NSW would like to pay our respect and acknowledge Aboriginal and Torres Strait Islander Peoples as the Traditional Custodians of the Land, Rivers and Sea. We acknowledge and pay our respect to the Elders, both past and present of all Nations.**

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Section 1   
Preparing for delivery

# About this guide

In this guide, you will find information you will need in order to prepare for and deliver this unit to your learners.

# About this unit

This unit describes the skills and knowledge required to understand the fundamentals of internet computing and cloud services. It involves undertaking a basic review of business computing needs and identifying options for introducing cloud computing services into a small business or work area in an organisation.

It applies to individuals who use problem-solving skills and take responsibility for adopting and promoting approaches to improve business operations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

This guide describes the delivery strategy for the following unit

BSBSMB412 Introduce Cloud Computing into Business Operations

There topics covered in this unit are:

* **Topic 1: Review computing needs**
* **Topic 2: Investigate cloud-computing services**
* **Topic 3: Develop a Plan**
* **Topic 4: Support Implementation**

There are two assessments in this unit:

1. Knowledge assessment—take home.
2. Project and Skills assessment—take home or at TAFE (unsupervised).

## Context

| Considerations for delivery | Descriptions |
| --- | --- |
| Target cohort/audience | This unit is delivered as part of the FNS40217 Certificate IV Accounting and Bookkeeping. |
| Contextualisation | This unit has been contextualised for the Certificate IV Accounting and Bookkeeping students. All activity examples are contextualised to suit a person working in a business considering the introduction of cloud-computing services to their business operations. |
| Delivery mode / location | Classroom /Online / Blended |
| Delivery timeline | 1 session of 3 hours for 10 weeks |
| Assessment strategy | Refer to the Unit Assessment Guide |
| Start date | 22nd July 2019 and continuous ongoing enrolments. |

# Resources required

The table below summarises the resources required for successful delivery of this unit

| Resources required | Resource outline |
| --- | --- |
| The Facilitator will need to provide: | **Materials**   * Student Workbook for BSBSMB412 Introduce Cloud Computing into Business Operations * Unit Assessment Guide * Other handouts (at teacher’s discretion)   **Equipment**   1. Data projector / smart board / whiteboard 2. Software / PC access (classroom learners) 3. VC or Internet access for Skype (online/blended learners) 4. Internet access to watch YouTube videos listed in the Student Workbook 5. Internet access to access and read articles listed as suggested reading in the Student Workbook |
| TAFE will provide the student with: | * Student portal login details / Skype access * Student Workbook * Library access to other textbooks relating to Topics * Library and/or computer lab access to word processing software and internet access |
| The student will need to provide: | * A computer with word processing and internet access for suggested readings and YouTube access to watch suggested videos. If unavailable student can use TAFE libraries or computer rooms * Textbook referred to in the Student Workbook:   **Introduce Cloud Computing into Business Operations, 1st Edition, Leigh Thomas, Better Teams Publications**  **ISBN: 978-1-925433-98-2** |

# Planning checklist

Prior to delivery of this unit, the facilitator should ensure that:

## All delivery modes

| All delivery modes | Description |
| --- | --- |
| Before students arrive to your classroom/ worksite/ location | 1. How do students contact you? 2. Become familiar with the unit delivery structure, resources and activities 3. Ensure you are familiar with the assessment requirements |
| During delivery | 1. Discuss the assessment requirements in detail with the student/class and have them sign the Student Declaration in session 1 2. Respond to student requests, by email or in person, and keep a record |
| Post student completion | 1. Provide Feedback to students and advise students of their results |

## If delivering online

| If delivering online | Description |
| --- | --- |
| Before students gain access to live unit | 1. Ensure your details are displayed correctly on TAFE Digital Campus 2. Become familiar with the unit delivery structure, resources and activities 3. Ensure you are familiar with the assessment requirements |
| During delivery | 1. Respond to student emails 2. Check your inbox for assessment submissions. Submissions of assessment must be marked within 10 days. 3. Monitor group chat / forum spaces 4. Review student participation reports |
| Post student completion | 1. Provide Feedback to students and advise students of their results |

Section 2

Unit delivery strategy

# Section 2 Unit delivery schedule

Below is a summary for the schedule for sessions delivered in this unit.

| Session / week |  | Session Content | Outcomes |
| --- | --- | --- | --- |
| 1 | Introductions & Introductory Learning | Welcome / Getting started | * Student welcome * Overview of unit / General housekeeping * Overview of the assessments and due dates * Introductory learning * Review and comparison of how business has changed the way it operates in the past 20-50 years |
| 2 | Review computing needs | Lesson 1 | * Identifying and documenting business requirements * Reviewing current computing resources * Collaborating with others to identify users’ needs * Factors to consider in identifying future needs * Potential future improvements/developments likely to impact businesses & how can these be identified early so businesses can be proactive rather than reactive * Legal / regulatory responsibilities or requirements |
| 3 | Review computing needs | Lesson 2 | * Apply the theoretical concepts from Lesson 1 of reviewing computing needs (i.e. session/week 2) to small business case scenarios * Introductory research gathering data on a particular type of business to be used in AE2 (the project assessment) |
| 4 | Investigate Cloud Computing | Lesson 1 | * Fundamentals of cloud computing * Research types of services offered and their costs * Assistance from specialists / expert guidance and advice * Opportunities & risks associated with introducing cloud computing * Potential problems envisaged * Problem solving strategies |
| 5 | Investigate Cloud Computing | Lesson 2 | * How to undertake a cost/benefit analysis? * What is a business case and how would it be documented and presented? * Apply the theoretical concepts from Lesson 1 of investigating cloud computing (i.e. session/week 4) to current examples of the use of cloud computing services by businesses * Time allocated for students to individually research a business that they will choose to use for their Skills Based Project Assessment and gather the information they need for Tasks 1 to 5 of Assessment Event 2 i.e. BSBSMB412\_AE\_Pro\_2of2 |
| 6 | Develop a Plan to Introduce Cloud Computing | Lesson 1 | * Planning and prioritising the introduction of cloud computing * Short-term goals including links to operational planning * Long-term goals including links to strategic planning * Linking the plans to strategic plans & mission statements * SMART goals * Organisational policies and procedures * Preparing a business case |
| 7 | Develop a Plan to Introduce Cloud Computing | Lesson 2 | * Preparing and documenting budgeted costs * Establishing/planning the steps and specific activities required to introduce cloud computing * Potential disruptions to business * Ways of minimising disruptions |
| 8 | Support the Implementation |  | * How to communicate the implementation plan to others * Likely barriers / concerns of employees * Organising training and coaching (when, how, methods of instruction) * How to support staff in the implementation phase * Formal & informal processes to monitor the success of the cloud services introduced * Reflecting and planning future improvements/developments/changes |
| 9 | Research/Preparation for Presentations |  | * Basic of preparing PowerPoint presentations * Computer lab or library session - Students to work on their presentations (Task 4 of Part 2 of AE\_Pro\_2of2 for this unit) |
| 10 | Student Presentations |  | * Student presentations |

Section 2

Session plans

This section provides a snap shot of each planned session. This section elaborates/expands on the session overview details above.

A “session” is a period of delivery that could be from as little as 1 hour, to a full day.

The session plans below are based on 1 weekly session of 3 hours for 10 weeks.

This section is “extractable” for easy reference by the facilitator within the learning environment.

This section can be edited to match the timing and duration of sessions planned to meet your individual delivery or to use activities from alternate textbooks that may be used at individual campuses.

# Session plan 1 - Welcome / Getting started

Before the session, check that you have:

* Printed the following documents: BSBSMB412\_StDec\_1of1
* Printed a class set of the following documents: BSBSMB412\_UAG; BSBSMB412\_SW\_1of1; BSBSMB412\_AE\_Kn\_1of2; BSBSMB412\_AE\_Pro\_2of2 or made electronic documents available to students.

| Item | Start Time | Duration | Topic | Main points / Key messages | Activity and references | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 20 min | Welcome | * Teacher introduction and contact details * Class roll * Class expectations: e.g.: breaks, etiquette if late, * Facilities: bathrooms, canteen, library, * WHS: Student safety, emergency procedures, evacuation drills and assembly points and bully-free environment * Learning resources: Text, shared drives etc. | * Ice breaker activity: appropriate activity to introduce the individual members of the group to each other. May not be necessary if the group has been together for some time. * Show ppt & discussion | * Show ppt presentation BSBSMB412\_Pres\_1of4 slides 1-16 |  |
| 2 |  | 20 min | Unit overview | * Introduction to the unit * Handout of relevant materials | * Handout Unit Assessment Guide (UAG): distribute and students to sign St Dec * Discussion of unit and unit requirements and what is involved in the assessments for the unit | * UAG * BSBSMB412\_StDec\_1of1 * BSBSMB412\_SW\_1of1 * Handout BSBSMB412\_AE\_Kn\_1of2 * Handout BSBSMB412\_AE\_Pro\_2of2 * Show ppt presentation BSBSMB412\_Pres\_1of4 slides 2-5 |  |
| 3 |  | 20 min | What is the cloud? | * What is ‘the Cloud’? * What is ‘Cloud Computing’? | * Class Discussion * Ask students their understanding of each term & whiteboard answers & show ppt slides 18-19 * Show YouTube video listed in SW p.8 | * BSBSMB412\_SW\_1of1 * BSBSMB412\_Pres\_1of4 slides 18-19 * YouTube Video “Computer Basics: What is the Cloud” 3:28 minutes – refer page 8 of SW. Link in Slide 20 of ppt1of2 | PC2.1, KE1, KE2 |
| 4 |  | 15 min | Cloud Services | * Range of cloud services on offer to a business | * Class Discussion * Read SW & articles listed in SW | * BSBSMB412\_Pres\_1of4 slide 21 * BSBSMB412\_SW\_1of1 | PC2.1, KE1, KE2 |
| 5 |  | 15 min | Cloud Service Providers | * Examples of cloud service providers | * Class Discussion * Read articles listed in SW p12 * Complete Practice Activity 1.1 Multiple choice questions | * BSBSMB412\_Pres\_1of4 slide 22 * Articles per SW p. 12   “How to build a business case”: <https://www.zdnet.com/article/cloud-computing-how-to-build-a-business-case/>  Also article “Top ten cloud computing examples and uses”  <https://www.newgenapps.com/blog/top-10-cloud-computing-examples-and-uses>  Also Article “[Five real-world examples of cloud computing](https://www.maropost.com/blog/5-real-world-examples-of-cloud-computing/)”  <https://www.maropost.com/5-real-world-examples-of-cloud-computing/> | PC2.1, FS2, KE1, KE2 |
| 6 |  | 40 min | History / Evolution of Business Computing | * Rise and development of Business computing * Rapid pace of technological developments * Manual record-keeping, Mainframes, Minis, PCs, other devices (tablets, mobile phones) | * Students to read Recommended Text pages 5-21 * If required as a supplementary activity, students to view the two slide external presentations listed as additional reading in SW p.63 highlighting the evolution of computers * Internet research on cloud service providers & services   Activity 1.2 | * (Recommended) Text pp.5-21 * BSBSMB412\_Pres\_2of4   Slides 1 to 12 of ppt presentation   * 2 external slide presentations:   <https://www.slideshare.net/MukaleleRogers/102-evolution-of-computers>  <https://www.slideshare.net/fhemrosacia/evolution-of-computer?next_slideshow=1> | PC1.2, FS1 |
| 7 |  | 20 min | History / Evolution of Business Computing | Emergence of computing devices and the cloud and their relevance to the modern business world and businesses - Applying knowledge to short answer questions | * Students to draft answers to revision questions 1-10 pages 22-24 text & discuss answers as a class group | * Text pp.5-21 * Text pp.22-24 | FS1 |
| 8 |  | 20 min | History / Evolution of Business Computing | Emergence of computing devices and the cloud and their relevance to the modern business world and businesses – collaborative discussion | * Collaborative discussion of the responses drafted by students to revision questions 1-10 pages 22-24 text * Teacher to whiteboard student responses | * Text pp.5-21 * Text pp.22-24 * Whiteboard/Whiteboard markers or butcher paper & easel | FS1 |
| 9 |  | 10 min | Summary | Recap/summarise main points covered in the session | Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 2 - Review computing needs

## Topic 1 - Lesson 1 of 2

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap what was covered last session * Identify this session and next week’s session will cover “Reviewing a businesses’ computing needs | Remind students last session covered a basic definition of: ‘Cloud Computing’ cloud services & cloud providers  It covered the history/evolution of computers |  |  |
| 2 |  | 20 min | Reviewing the computing needs of businesses | * Reviewing the computing needs of businesses * Methods used to identify computer needs * Identifying critical systems | * Class Discussion   Ask students the following questions:  “How can you identify the computing needs of a business?”  “What are critical systems” | * Whiteboard & Whiteboard markers * BSBSMB412\_Pres\_3of4 Slides 3 & 4 | PC1.1 |
| 3 |  | 10 min | Documenting the understanding of computing needs | * Options available to document computer needs in a summarised way once data is collated | * Class Discussion   Ask students the following question:  “What options are available to document the computing needs of a business and what details should be documented?” | * Whiteboard & Whiteboard markers * BSBSMB412\_Pres\_3of4 Slide 5 | PC1.1, PC1.3 |
| 4 |  | 10 min | People involved in understanding and documenting computing needs | * Identifying people involved | * Class Discussion   Ask students the following question:  “Who needs to be involved in identifying and documenting the computing needs of a business?” | * Whiteboard & Whiteboard markers * BSBSMB412\_Pres\_3of4 Slide 6 | PC1.1, PC1.2 |
| 5 |  | 15 min | Collaborating with others | * What are common ways of collaborating * What common problems might a business face * How can you ensure all parties are consulted? * Good collaboration skills * Active Listening and questioning skills | * Class Discussion   Ask students the following questions or to do the following tasks:  “What common problems might a business face in the consultation phase?”  “How can you resolve disagreements in views/opinions?”  “How can you ensure all parties have been consulted in identifying ICT needs?”  “Create a list of 6 Tips to effectively collaborating with others” | * Whiteboard & Whiteboard markers * BSBSMB412\_Pres\_3of4 Slides 7-10 | PC1.2, FS5, FS9 |
| 6 |  | 15 min | Future computing needs | * How to identify future computing needs * How can discussing future options with relevant people lead to potential improvements? | * Class Discussion   Ask students the following question:  “How can discussing future options with relevant people lead to potential improvements?” | * Whiteboard & Whiteboard markers * BSBSMB412\_Pres\_3of4 Slide 11 | PC1.2, FS5, FS9 |
| 7 |  | 1 hr | Consolidate Learning on Computing needs | * Text and SW content on Identifying computing needs of businesses | * Students to read and summarise relevant sections of Text and SW | * Read Text pp27-58 * Read SW pp.6-10 | PC1.1, PC1.2, PC1.3 |
| 8 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework or (reading as per the student workbook) |  |  |

# Session plan 3 - Review computing needs

## Topic 1 - Lesson 2 of 2

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap last session * Review computing needs - Lesson 2 contents | * Recap what was covered last session * Introduce Lesson 2 of the topic Review computing   Inform students this lesson will apply learning to Case Examples and common types of business | Recommend printing a couple of spare Templates for Activity 2.6 in case students forget to bring their SW. Refer pages 79-80 of this FG for a copy of the Activity Template to print |  |
| 2 |  | 40 min | Case Example | * Case Example – “The Antique Boutique” | * Read Text Case Example pp.25-26 & answer the question in the case example | * Text pp.25-26 | PC1.1, PC1.2, PC1.3 |
| 3 |  | 1 hr | Computer Equipment and Information System needs of different business types | * Consider the likely Information & Computer Technology (ICT) Needs for the following business types:   - a medical centre  - a law firm  - a building firm  - an insurance company  - a retail business | In small groups consider the ICT ‘Needs’ of each of the different business types and complete the Activity 2.6 table in the SW by listing common computer equipment in one column & critical information systems in another for each different business type  Provide students with an electronic copy of the Activity 2.6 table. The electronic copy has the filename BSBSMB412\_Wksh\_1of1 | * Text pp.25-58 * SW pp.6-11 * Template in SW pp35-36 for Activity 2.6 * BSBSMB412\_Wksh\_1of1 | PC1.1, PC1.2, PC1.3,  PE1 |
| 4 |  | 1 hr | Research for use in Assessment 2 | * Research a business type and begin gathering the information required for Part 1 of Assessment 2 (the Project). | * Research a business type and begin gathering the information required for Part 1 of Assessment 2 (the Project).   Begin building your business Case Scenario – Refer Task Instructions and consider the requirements of Tasks 1 & 2 and gather the required research information that will allow you to start working on and documenting your responses | * Computer access * Internet access | PC1.1, PC1.2, PC1.3 |
| 5 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 4 - Investigating cloud computing services to meet business needs

## Topic 2 - Lesson 1 of 2

Before the session, check that you have:

* Arranged a computer room so that students have access to the readings or print the articles for the students or email to students and have them print and bring articles to the session

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap the last topic (review computing needs) and introduce this new topic (investigating cloud computing services to meet business needs) | * Teacher led discussion |  |  |
| 2 |  | 30 min | Fundamentals of cloud computing | * What is cloud computing * Fundamentals * Types of clouds (Public, private & hybrid) * Virtualisation * Terminology associated with Cloud Services | * Read SW, Text and Articles | * Computers with internet access * Read SW pp.15-17 * Read Text pp63-70 * Read Article:   [CLOUD](https://patterns.arcitura.com/cloud-computing-patterns/basic_concepts_and_terminology/cloud) <https://patterns.arcitura.com/cloud-computing-patterns/basics/basic-concepts-and-terminology/cloud>   * Watch YouTube Video:   [On Premise VS Cloud Computing - Pros and Cons Comparison](https://www.youtube.com/watch?v=KVydGQGR1Lo)  Refer SW p17. Duration: 3:40 min   * Read SW pp.18-19 re. Cloud Services Terminology | PC2.1 |
| 3 |  | 1 hr | Types of Services Offered | * Types of Services   - infrastructure  - platform  - software   * SaaS, PaaS & IaaS | * Read SW, Text and Articles | * Read Text pp70-76 * Watch/show YouTube Video:   [Cloud Computing Services Models (laaS, PaaS and SaaS explained)](https://www.youtube.com/watch?v=36zducUX16w) - Refer SW p19. Duration: 6:42 min   * Watch/show YouTube Video:   [Forms of Cloud services and types of cloud service](https://www.youtube.com/watch?v=uroryFU78gM&feature=youtu.be) - Refer SW p19. Duration: 5:50 min | PC2.1 |
| 4 |  | 30 min | Specialists | * Seeking assistance from specialists * Awareness of some cloud providers | * Read SW * Search cloud provider sites * Activity 2.1 SW p.20 * Activity 2.2 SW p.21 * Activity 2.3 SW p.27 | * SW p.20-26 * Text p.84 * Activity 2.1 SW p.20 * Activity 2.2 SW p.21 * Activity 2.3 SW p.27 | PC2.2, FS10 |
| 5 |  | 30 min | Risks, benefits & opportunities | * Risks, benefits & opportunities associated with introducing cloud computing * Potential problems & problem solving strategies | * Read SW, Text and Articles * Activity 2.4 SW p.31 | * Read SW pp.28-31 * Read Text pp77-83 * Read Articles:   Five challenges to cloud computing success:  <https://www.intheblack.com/articles/2017/10/06/challenges-cloud-computer>  Potential opportunities and risks:  <https://www.digitalistmag.com/technologies/cloud-computing/2012/10/25/risks-and-benefits-of-cloud-computing-020025>  Risks and benefits of moving to the cloud:  <https://www.oipc.bc.ca/guidance-documents/1437> | PC2.4, PE2.3 |
| 6 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 5 - Investigating cloud computing services to meet business needs

## Topic 2 - Lesson 2 of 2

Before the session, check that you have:

* Informed students to bring their AE2 (the project assessment) assessment instructions to the session

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap what was covered last session and introduce this session | * Inform the students this session will cover:   - obtaining costings of cloud services  - preparing a cost/benefit analysis  - preparing a business case |  |  |
| 2 |  | 1 hr | Cost of various cloud services | * What constitutes the cost of a cloud service * Research a range of costs associated with cloud services | * Class Discussion   Ask students the following question:   * “What constitutes the “Cost” of a cloud service * Activity 2.5 SW p.32 | * Read & refer to SW p.28-32 * Text pp.85-90 * Research (via internet searches) a range of cloud services and their costs | PC2.1 |
| 3 |  | 1 hr | Cost/Benefit Analysis | * How to undertake a cost/benefit analysis * Gather cost/benefit analysis data on the internet * Draft a cost/benefit analysis | * Read SW, Text and Articles * Gather cost/benefit analysis data for the type of business and cloud services you are planning for use in the project assessment – Part 1 Tasks 1-5 | * Read SW p.28 * Read Text pp.85-90 * AE\_Pro\_2of2 Task5 * Read Articles:   Cost-benefit analysis – Deciding, quantitatively whether to go ahead  <https://www.mindtools.com/pages/article/newTED_08.htm> | PC2.3, FS4,  KE3 |
| 4 |  | 30 min | Preparing a Business Case | * How to Prepare a Business Case * Preparing a Business Case to implement cloud computing into the business | * Read SW, Text and Articles | * Read SW p.33-34 * Read Text pp.88-94 * AE\_Pro\_2of2 Task5 * Read Articles:   How to prepare a business case:  <https://www.skillsyouneed.com/write/business-case.html>  How to build a business case:  <https://www.zdnet.com/article/cloud-computing-how-to-build-a-business-case/> | PC2.5, PE2.2, PE2.3, PE3, PE4 |
| 5 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 6 - Develop a Plan to Introduce Cloud Computing

## Topic 3 - Lesson 1 of 2

Before the session, check that you have:

* Arranged access to a computer room and the internet

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap the last topic (Investigating Cloud Computing Services to Meet Business Needs) and introduce this new topic (Develop a Plan to Introduce Cloud Computing) | * Teacher led discussion |  |  |
| 2 |  | 30 min | Planning & Prioritising | * Planning & Prioritising the introduction of cloud computing | * Read SW &Text | * Read SW p.38-40 * Text p.99 | PC3.1 |
| 3 |  | 15 min | Short-Term Goals/Plans | * Short-Term goals | * Read SW &Text | * Read SW p.40-41 * Text p.99-102 | PC3.1 |
| 4 |  | 1 hr | Long-Term Goals/Plans | * Long-Term Goals * Links to Strategic Planning & Mission Statements * Apply to Project Assessment Plan/Proposal to implement cloud computing services for a business | * Read SW &Text * Apply theoretical knowledge to Assessment 2 i.e. Project assessment | * Read SW p.40-41 * Text p.99-102 | PC3.1 |
| 5 |  | 1 hr | Goals  Need to be specific, measurable and achievable | * SMART goals * Apply to Project Assessment Plan/Proposal to implement cloud computing services for a business | * Read SW * Apply theoretical knowledge to Assessment 2 i.e. Project assessment | * Read SW p.41 | PC3.1 |
| 6 |  | 10 min | Organisational Policies and Procedures & impacts on Developing the Plan/Proposal | * Organisational Policies & Procedures * Implications of legal and regulatory responsibilities and need to ensure the conversion plan will not jeopardise the business meeting these requirements | * Class Discussion | * Read Article   Five challenges to cloud computing success: -refer p.30 for the Intheblack article which covers privacy legislation and requirements | FS7, FS8 |
| 7 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 7 - Develop a Plan to Introduce Cloud Computing

## Topic 3 - Lesson 2 of 2

Before the session, check that you have:

* Arranged access to a computer room and the internet

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap what was covered last session and introduce this session | * Teacher led discussion |  |  |
| 2 |  | 20 min | Developing the Plan/Proposal | * Actual Plan/Proposal i.e. Business Case Scenario chosen i.e. specific services to convert to cloud services, provider chosen and business type and industry identified | * Review documentation on preparing a business case from SW, Text and articles listed in Session 6 * Apply to AE2 Project | * Read SW p.33-34 * Text p.85-92 | PC2.5, FS3, PE4 |
| 3 |  | 1 hr | Preparing and Documenting the Costs | * Preparing and Documenting Budgeted Costs | * Read SW, Text and Articles * Apply theoretical knowledge to Assessment 2 i.e. Project assessment | * Read SW p.43-45 * Text p.85-90 | PC3.2, PE2.2 |
| 4 |  | 1 hr | Specific steps and activities required in developing the plan | * Establishing/planning the steps and specific activities required to introduce cloud computing | * Read SW, Text and Articles * Apply theoretical knowledge to Assessment 2 i.e. Project assessment | * Read SW p.46-48 * Text p.105-106 | PC3.3, FS11 |
| 5 |  | 10 min | Disruptions to business | * Potential Disruptions to business | * Class Discussion | * Whiteboard & Whiteboard markers * Text p.106 | PC2.4, PC3.1, PC3.3, PE2.3 |
| 6 |  | 10 min | Strategies to minimise disruptions | * Strategies/ways of minimising disruptions | * Class Discussion | Whiteboard & Whiteboard markers | PC3.3 |
| 7 |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 8 - Support the implementation

Before the session, check that you have:

* Arranged access to a computer room and the internet

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Introduction | * Recap the last topic (Develop a Plan to Introduce Cloud Computing) and introduce this new topic (Support the Implementation) | * Teacher led discussion |  |  |
| 2 |  | 20 min | Communicating the plan to introduce cloud computing | * How to communicate the implementation plan to others | * Class Discussion   Ask students the following question:  “How can you communicate the implementation plan to others?” | * Whiteboard & Whiteboard markers   Refer p114 of text for guidance on communicating the plan to staff | PC4.1 |
| 3 |  | 10 min | Barriers/concerns of employees | * Likely barriers/concerns of employees | * Class Discussion   Ask students the following question:  “Identify any likely barriers or concerns staff may have about the implementation of cloud computing options?” | * Whiteboard & Whiteboard markers   Refer p.53-54 of the SW for guidance | FS12 |
| 4 |  | 10 min | Overcoming barriers/concerns | * Strategies to overcome those concerns | * Class Discussion   Ask students the following question:  “Identify any strategies to overcome barriers and concerns of staff?” | * Whiteboard & Whiteboard markers   Refer p.53-54 of the SW for guidance | FS12, FS13 |
|  |  | 20 min | Training | * Organising Training/coaching   (how, when & method of instruction) | * Read SW | * SW p. 53-54 | PC4.2, PC4.3 |
|  |  | 10 min | Supporting Staff | * How to further support staff in the implementation phase | * Read SW | * SW p. 54-55 | PC4.3 |
|  |  | 10 min | Monitoring the success of the cloud services | * Formal and informal processes to monitor the success of the cloud services introduced | * Read SW | * SW p. 56-59 | FS13 |
|  |  | 10 min | Future Plans | * Reflecting and planning future improvements development strategies/changes | * Read SW | * SW p. 56-59 | FS13 |
|  |  | 1 hr | Research & gathering data relating to training & supporting staff and communicating the implementation process with staff | * Research and information gathering * Apply to Project Assessment Plan/Proposal to implement cloud computing services for a business | * Apply theoretical knowledge to Assessment 2 i.e. Project assessment | Project Assessment AE\_2of2  Part 1 Task 7 &  Part 2 Task 3 | PC4.1, PC4.2, PC4.3 |
|  |  | 10 min | Summary | * Recap/summarise main points covered in the session | * Teacher may assign Homework (reading or activities as per the student workbook) |  |  |

# Session plan 9 - Research and Preparation for Presentations

Before the session, check that you have:

* booked a computer room for this session – students will be practicing using Microsoft PowerPoint

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 15 min | Introduction | * Requirement to prepare a slide presentation for the tasks in Assessment Event 2 Part 2 | * Discuss and clarify the requirements of Part 2 (Tasks 1-4) of BSBSMB412\_AE\_Pro\_2of2 * Respond to any questions the students may have regarding the requirements | * BSBSMB412\_AE\_Pro\_2of2 | PC4.1 |
| 2 |  | 15 min | General / Overall Presentation Tips | * Presentation Tips * Tips for preparing slides (recommended guidelines) | * Show presentation 3of3 and discuss presentation guidelines and tips | * ppt presentation BSBSMB412\_Pres\_4of4 | PC4.1, FS14  Assessment Conditions:  - Access to business equipment & resources  - Business technology |
| 3 |  | 30 min | Microsoft PowerPoint Software | * How to prepare a Presentation using Microsoft PowerPoint Software | * Students to watch either of the 2 videos listed on page 51 of the SW if they are not confident in preparing slide presentations using Microsoft PowerPoint | * Introductory Video by Microsoft Office Support   <https://support.office.com/en-us/article/create-a-presentation-in-powerpoint-422250f8-5721-4cea-92cc-202fa7b89617>  Beginners guides to MS PowerPoint - Video links to 2 videos listed on page 51 of the SW  <https://www.youtube.com/watch?v=XF34-Wu6qWU>  <https://www.youtube.com/watch?v=u7Tku3_RGPs> | FS14  Assessment Conditions:  - Access to business equipment & resources  - Business technology |
| 4 |  | 1 hr  45 min | Practice with PowerPoint Software / Preparing Presentations | * Student Practice with PowerPoint presentation software | * Students to practice preparing slides using PowerPoint based on the principles suggested in item 2 of this session i.e. the guidelines and tips as shown in the ppt presentation | * Access to computers with MS PowerPoint software installed | Assessment Conditions:  - Access to business equipment & resources  - Business technology |
| 5 |  | 15 min | Summary | * Reminder - presentations will occur next session * Arrange order of presentation | * Remind students that the actual presentations will occur next class * Formalise the order in which the students will be presenting * Advise students that to meet the criteria of ‘interacts with others’ and demonstrate the dimensions of competency that they should be prepared to answer any questions raised by students or the assessor at the end of their presentation | * Typed list of students (listed in presentation order) |  |

# Session plan 10 - Student Presentations

Before the session, check that you have:

* Set up the computer and data-projector for the students to use in their presentations
* Pre-Print enough copies of the Observation Checklist (one copy for each student) to document your assessment of each student
* Reminded students of the protocols to be followed when fellow students are presenting (Refer Item 1 below)
* Prepare/Bring a typed list of students with names listed in the order they are presenting (as agree with students in the last session)

| Item | Start Time | Duration | Topic | Summary of main points | Activity | Resources required | Criteria addressed |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 |  | 10 min | Presentations -Introduction | * Brief Introduction * Establish Classroom guidelines and student rights and responsibilities (including expected behaviour while fellow students are presenting) | Teacher instructs the students on the process  Confirms who is in attendance and the order to be followed for the presentations  Establishes the ground rules and expected behaviours while other students are presenting  (i.e. silence and courtesy) | * Access to computers with PowerPoint presentation software * DataPro linked to the computer |  |
| 2 |  | 160 min | Student Presentations | * Student presentations on the implementation of cloud computing into business operations   (expanding on their Business Case & presenting the implementation process) | Students to deliver their 5-10 minute presentations | * Access to computers with PowerPoint presentation software * DataPro linked to the computer | PC2.5, PC3.1, PC3.2, PC3.3, PC4.1, PC4.2, PC4.3, FS5, FS6, FS14  Assessment Conditions:  - Access to business equipment & resources  - Business technology  - Case studies or real situations (i.e. types of businesses)  - Interaction with others |
| 3 |  | 10 min | Wrap – up | * Thank students for the effort they put into their presentations |  |  |  |

# Appendices

# Appendix 1 – Suggested solutions

## to In-class activities/discussion questions listed in Session Plans

### In-class Questions and Suggested Answers/Student Responses

### Session plan 2 (Week 2) – Review computing needs

**NOTE:** Refer to pages 9 & 10 of the SW for a detailed listing of what business’s computing needs include:

These Questions can be found in Slide Presentation BSBSMB412\_Pres\_3of4

**Suggested Solutions** shown below have been inserted in the **Instructor Notes** section of each slide

**“How can you identify the computing needs of a business?”**

* Talk to staff and identify what computer equipment and software or computer systems or applications that they currently use at work and identify additional computer and information systems they think they need in the future
* See what computer equipment competitors in the industry have
* Take a stocktake of the current equipment and information systems in the business/offices/shops etc.
* Have staff rank the equipment (current and future) in terms of how essential the equipment is to business continuity i.e. identify what is essential and what would increase productivity but is not necessarily needed for continuity of business operations or where alternative equipment could possibly be used
* Ask staff to fully explain how the computer equipment and information systems function. They should identify any links and interrelationships between computer equipment items and systems in use by the business or linked to customers, suppliers, regulators etc.
* Read business magazines and Technology magazines and stay abreast of the latest developments
* Attend IT innovation conventions and identify computer equipment and systems the business should have in the future

**“What are critical systems?”**

Critical equipment and computer systems are those that the business cannot operate without. They are required to undertake and process transactions related to the core business procedures and operations

**“What are options available to document the computing needs of a business and what details should be documented?”**

* Do an audit of the computer equipment and systems.
* Tag the physical items and record their details in a register of listing.
* Include make, model, serial numbers of equipment. Record their location.
* Record who uses the and how often they are used.
* Identify their importance to the continuity of operations (give them a ranking e.g. 1 to 10). Record the version numbers of software products. Identify the manufacturers/providers of information systems.
* Identify if they are off-the-shelf vendor systems or online or cloud systems or systems that were developed by in-house programmers.

**“Who needs to be involved in identifying and documenting the computing needs of a business?”**

* All current employees
* Managers/Finance committee/Board and CEO is major changes to systems and computer equipment are seen as necessary includes decisions and proposals converting data and systems to the cloud
* Industry specialists
* Software and computing platform providers
* Hardware providers/vendors
* Specialist IT experts
* Other successful businesses in the industry (where they will talk to representatives of the business)

**“What common problems might a business face in the consultation phase?”**

* The may face resistance from employees – it is natural for employees to be fearful of ‘change’. They need to be reassured they will receive adequate training and support.
* Employees may disagree what is essential and what can easily be replaced or substituted
* Employees may see it as a way of getting additional non-essential systems and equipment (bells & whistles) which may use or tie up funds unnecessarily
* They may be given inaccurate information
* Employees may see all their current equipment as essential

**“How can you resolve disagreements in views/opinions?”**

* Arrange a meeting with both parties and discuss the issue openly in a neutral location
* Keep everyone clam and define acceptable behaviour
* Apply conflict resolution strategies and try for a win-win situation
* Use active listening skills allowing each party a fair chance to speak without interruption
* Look beneath the surface and identify and address any deeper issues

**“How can you ensure all parties have been consulted in identifying ICT needs?”**

* Arrange a meeting with all staff and gather the relevant information required
* Contact any staff that could not attend by email or phone. Ensure you have spoken to all staff.
* Give staff an opportunity to supply addition information about the ICT equipment and needs at a later date by arranging a means and timeframe for follow-up correspondence

**“Create a list of 6 Tips to effectively collaborating with others”**

* Outline in writing what is required from staff
* Set team norms for working together i.e. mutual courtesy and respect of each other ideas and views
* Brief staff in person (i.e. at a staff meeting) or one by one via phone/skype and clarify requirements and address any fears or misconceptions
* Create a template or required format for data to be gathered and collated
* Allow staff to be open and honest and ensure they understand the importance of their role in the team/organisation and project proposal
* Create a non-threatening environment where staff feel free to supply information, data and suggestions/recommendations. Ensure participation by all and ensure all team members apply active listening and questioning techniques

**“How can discussing future options with relevant people lead to potential improvements?”**

* Staff have a wealth of operational knowledge and most continuous improvement programs are based around receiving and acting on feedback from employees or customers
* Some staff may be members of professional or business associations and have knowledge of new Information Technology developments (equipment and systems)

### Suggested Student Responses to Student workbook activities

## Activity 1.2: Cloud computing applications and software

To assist you with your understanding of two of the main types of cloud computing providers for small business, please research [MYOB](https://www.myob.com/au/blog/cloud-accounting-explained/) and [Xero](https://www.xero.com/au/why-xero/benefits/online-accounting/)

Prepare a short written summary (no longer than a page) describing the features and benefits of cloud based software.

* The cloud alleviates the need for businesses to store and manage data and maintain expensive computer hardware. You can operate the software from a single computer with a standard modem providing an internet connection, without being connected to a server or having specific software installed on the computer;
* The information can be updated and accessed from any computer anywhere in the world;
* There is only one ledger kept and that is the file in the cloud, which improves the accuracy of the information and therefore minimises errors at BAS and tax time;
* The ability for owners to interact with their accountant in real time instead of having to send the data file to the accountant each time;
* You often get paid faster for better cash flow with better connectivity for online payments;
* Data is often better protected with multiple layers of security including industry standard encryption and secure data centres
* Better access to online help with the option to choose to let the support tem view your data and provide advice;
* A monthly access fee is paid which usually works out less than the cost of buying the software and then paying for annual subscriptions; and
* The software is automatically kept up-to-date by the provider meaning that you don’t need to download updates such as new tax rates where the payroll module is used.

## Activity 2.1

Identify what type of cloud services each of the providers below provides to business. You may wish to jot down any useful website references for further research when doing the cost/benefit analysis and business case proposal in Assessment Event 2.

| Cloud Provider | Type of cloud services supplied to businesses.  List any useful research weblink references for use in the Business Case Proposal to be used in Assessment Event 2 |
| --- | --- |
| Google Cloud | Use Google's core infrastructure, data analytics and machine learning  Google cloud is a platform providing the following services:  **Compute:** From virtual machines with proven price/performance advantages to a fully managed app development platform  **Storage & Databases:** Scalable, resilient, high performance object storage and databases for your applications  **Networking:** State-of-the-art software-defined networking products on Google’s private fiber network  **Big Data:** Fully managed data warehousing, batch and stream processing, data exploration, Hadoop/Spark, and reliable messaging  **Data Transfer:** Online and offline transfer solutions for moving data quickly and securely  **API Platform & Ecosystems:** Cross-cloud API platform enabling businesses to unlock the value of data, deliver modern applications, and power ecosystems  **Internet of Things:** Intelligent IoT platform that unlocks business insights from your global device network  **Cloud AI:** Fast, large scale and easy to use AI services  **Management Tools:** Monitoring, logging, and diagnostics and more, all in an easy to use web management console or mobile app |
| Google Cloud (cont.) | **Developer Tools:** Develop and deploy your applications using our command-line interface and other developer tools  **Identity and Security:** Control access and visibility to resources running on a platform protected by Google’s security model  **Professional Services:** Learn on your own, consult an expert, or get Google on your team  [https://cloud.google.com](https://cloud.google.com/gcp/?utm_source=google&utm_medium=cpc&utm_campaign=japac-AU-all-en-dr-bkws-all-super-trial-e-dr-1003987&utm_content=text-ad-none-none-DEV_c-CRE_248263937491-ADGP_Hybrid%20%7C%20AW%20SEM%20%7C%20BKWS%20~%20T1%20%7C%20EXA%20%7C%20General%20%7C%201:1%20%7C%20AU%20%7C%20en%20%7C%20google%20cloud-KWID_43700023244271254-kwd-296530647816&userloc_9072286&utm_term=KW_google%20cloud&gclid=CjwKCAjw27jnBRBuEiwAdjQXDBpZ9FTGZ99A1-mm8Z2D8lkiia0Qzuc6my5SwjIYuCkkmC0xJTHCWxoCIogQAvD_BwE) |
| Microsoft Azure | Azure Cloud Services is an example of a platform as a service (PaaS). Like Azure App Service, this technology is designed to support applications that are scalable, reliable, and inexpensive to operate. In the same way that App Service is hosted on virtual machines (VMs), so too is Azure Cloud Services. However, you have more control over the VMs. You can install your own software on VMs that use Azure Cloud Services, and you can access them remotely.  **Test and Deploy Enterprise Apps:** Use Azure Virtual Machines, Managed Disks and SQL databases while providing high availability and network performance  **Create Custom Mobile Experiences:** Build based on your customers’ interests and behaviour using App Service and Azure Cosmos DB, Xamarin, HockeyApp and Traffic Manager  **Gain Insights from your data:** Make better decisions and create finer experiences using Machine Learning, Azure Databricks and HDInsight  **App Service:** Quickly create powerful apps (up to 10 apps) for any platform or device using your choice of tools, including Node.js and PHP  **DevTest Labs:** Enable fast, easy and learn dev-test environments  [https://azure.microsoft.com](https://azure.microsoft.com/en-au/free/search/?&OCID=AID719799_SEM_ZLyOCUlO&lnkd=Google_Azure_Compete&dclid=CIr4wquHwuICFQmAcAodScMAJA) |
| Microsoft Azure (Cont.) | The following products are free for 12 months:  **Managed Disks:** Get premium, secured disk storage for Azure Virtual Machines with simplified management  **File Storage:** Migrate to simple, distributed, cross-platform file storage without changing code  **SQL Database:** Create an SQL database that delivers intelligence built in  **Azure Cosmos DB:** Build and scale your application with a globally distributed, multi-model database service  **Bandwidth (Data Transfer):** Transfer data inbound and outbound through our robust network of global data centres  [https://azure.microsoft.com](https://azure.microsoft.com/en-au/free/search/?&OCID=AID719799_SEM_ZLyOCUlO&lnkd=Google_Azure_Compete&dclid=CIr4wquHwuICFQmAcAodScMAJA) |
| Amazon Web Services | AWS services provides:  **Computing power:** virtual servers in the cloud (public and private servers), a platform to run batch jobs, a platform to run and manage web apps  **Analytics:** fast, simple, cost-effective data warehousing, managed search service, analyse video and data streams, fast business analytics service, data-driven workflows  **Application Integration:** including managed message queues  **AR & VR:** Build and run VR and AR applications  **AWS Cost Management services:** Cost and usage analysis and budgeting using AWS tools  **Business Applications:** Alexa for business & meetings, video calls & chat and secure email and calendaring  **Networking & Content Delivery:** Dedicated network connection & secure access services, monitor and control micro servers  **Game Tech:** Cost effective dedicated game server hosting |
| Amazon Web Services (Cont.) | **Machine Learning:** Build, train and deploy machine learning models, build voice and text chatbots, analyse image and video, turn text into life-like speech  **Management & Governance:** Manage resources and apps, manage resources with templates  **Robotics:** develop, test, and deploy intelligent robotics applications  **Database:** range of managed relational database services available (Oracle, SQL, Maria DB, PostgreSQL, QLDB)  **Developer Tools:** Develop and deploy applications, build and test code, analyse and de-bug your applications  **Storage:** scalable storage in the cloud  **Security:** Manage user access & encryption keys, managed threat detection service, central management of firewall rules, filter malicious web traffic, DDoS protection  **Migration and Transfer:** simple fast online data transfer  <https://aws.amazon.com/> |
| Adobe | Adobe Creative Cloud is a set of applications and services from Adobe Systems that gives subscribers access to a collection of software used for graphic design, video editing, web development, photography, along with a set of mobile applications and also some optional cloud services.  **Adobe XD CC:** Design, prototype and share engaging user experiences for websites, mobile apps  **Adobe Spark**: Easily create branded social graphics, web pages and video stories that make your business stand out  **Adobe Premiere Rush CC:** Quickly create branded online videos across all your devices and export them directly to social channels  [https://www.adobe.com](https://www.adobe.com/au/creativecloud/business/teams.html?gclid=CjwKCAjw27jnBRBuEiwAdjQXDO0DAerLetjGua7xhtMaaS4dduIs2a7zhPp-57rfRCq0jP6uq_X7uhoCIUcQAvD_BwE&sdid=V2XYKZWQ&mv=search&ef_id=CjwKCAjw27jnBRBuEiwAdjQXDO0DAerLetjGua7xhtMaaS4dduIs2a7zhPp-57rfRCq0jP6uq_X7uhoCIUcQAvD_BwE:G:s) |
| IBM Cloud | BM Cloud is a suite of cloud computing services from IBM that offers both platform as a service (PaaS) and infrastructure as a service (IaaS). With IBM Cloud IaaS, organizations can deploy and access virtualized IT resources -- such as compute power, storage and networking -- over the internet.  **IBM Cloud Private for data:** data management, data governance & business analytics  **IBM Multicloud manager:** manage multicloud infrastructures  **Digital Business Automation:** is an integrated platform of automation capabilities that helps businesses drive virtually all types of automated projects (large & small) at speed and scale  **Watson Assistant:** platform that allows developers and non-technical users to collaborate on building conversational AI solutions  **Senzing:** technology helps discover who is who and who is related to who - (includes customer 360, fraud detection)  **Cloud Storage**  **IBM Event Streams:** event management software platform for event-driven apps  **IBM PowerAI Vision:** complete ecosystem to autolabel data sets for video analytic, train and deploy models  **IBM Spectrum Symphony:** data- intensive analytics applications  **IBM Security Access Manager:** access management and multi factor identification  **IBM Cloud Cost and Asset Management:** Multi-cloud management platform to optimise your costs  [https://www.ibm.com](https://www.ibm.com/au-en/cloud/private?cm_mmc=Search_Google-_-Hybrid+Cloud_Management+and+Platform-_-AS_AU-_-ibm+cloud+products_Broad_&cm_mmca1=000028YT&cm_mmca2=10007311&cm_mmca3=&S_PKG=&cm_mmca7=9072286&cm_mmca8=kwd-15029337096&cm_mmca9=_k_CjwKCAjw27jnBRBuEiwAdjQXDB9dLRE7XkmEBjrQbaSs7M6n-I3WHj2eJnWUjDTpSciXuDu-p4T2dxoC-9MQAvD_BwE_k_&cm_mmca10=330412415913&cm_mmca11=b&mkwid=_k_CjwKCAjw27jnBRBuEiwAdjQXDB9dLRE7XkmEBjrQbaSs7M6n-I3WHj2eJnWUjDTpSciXuDu-p4T2dxoC-9MQAvD_BwE_k__906_43609&gclid=CjwKCAjw27jnBRBuEiwAdjQXDB9dLRE7XkmEBjrQbaSs7M6n-I3WHj2eJnWUjDTpSciXuDu-p4T2dxoC-9MQAvD_BwE) |
| Rackspace Cloud | Rackspace Inc. is an American managed cloud computing company based in Windcrest, Texas, a suburb of San Antonio.  **Proven Solutions, Powered by Experts**  “Your IT should be customized to your business and delivered the way you need it. Our experts get to know what you do, and how you do it, before bringing you a highly opinionated, custom solution. We assess the world’s leading technologies and bring two decades of experience helping companies in 150 countries solve their biggest technology challenges.”  Professional Services: multi-cloud solution - Professional Services IT solution engineers have expertise and experience in all the major cloud platforms and technologies. As your trusted partner, Rackspace can handle your migration details for you and provide ongoing management and optimization, so you can focus on your core business. The Professional Services Team will evaluate your workloads, workflows, systems, data centres and spending and advise options and solutions to maximise your business potential  **Database Services:** Database solutions. Experts protect and manage your infrastructure, apps and data around the clock, minimising your commitments around operations, monitoring and troubleshooting  **Data centre breakout solution:** - Data storage. Rackspace engineers will design and build your optimal environment, across servers, storage, switches and firewalls  **Security services:** strengthen your IT network security. They will address your specific security and compliance requirements, with a plan that protects your data and systems  NOTE: many software vendors are beginning to shift to license-based, cloud-only subscription models. Cloud services allow you to position your business to take advantage of these new cost models while modernizing your IT  <https://www.rackspace.com/> |
| Xero | Xero is an online accounting software application. It allows you to pay your staff and control your cash flow.  The features include:  **Invoicing and quotes:** Create professional recurring invoices and receive updates when they’re opened  **Bank reconciliations:** Your latest banking, credit card and PayPal transactions are imported and categorised  **Inventory:** inventory items speed up invoicing while tracking sales and purchases  **Pay your employees:** calculate the payroll, pay employees and manage payroll taxes  **Purchase orders:** Create and email custom purchase orders and copy to bills for payment  **Enter bills:** Manage your cashflow by scheduling payments and batch paying suppliers  **Go Mobile:** The Xero mobile app works with iPhone and iPad & Android phones and tablets  **Expense Claims**: Manage your cashflow by scheduling payments. Easily handle personal expenses  **700+ third-party apps:** Inventory, invoicing, time tracking, expenses and more all integrate with Xero  On demand pricing plans:    <https://www.xero.com/au/> |
| Reckon | Easy & affordable accounting software with features to run every aspect of your business  The accounting software comprises the following modules:  **The accounting basics:** Core modules (the basics): see below $5/month  **Invoices and billings:**  **Bank Reconciliations:** i.e. Connect to your bank  **Jobs and Projects:** Manage jobs and projects  **Time and Expenses:** Track time and claim expenses $3/month  **Payroll:** Easy Payroll $3/month  **Tax and Compliance:**  **Business Activity Statements:**  **The accounting basics:**  For $5/month monitor income, expenses, cash flow and access real-time reporting. Easily track GST & prepare BAS statements for end of financial year.    [https://www.reckon.com/au/](https://www.reckon.com/au/accounting-software/?gclid=CjwKCAjw27jnBRBuEiwAdjQXDLAId6Z6tcx2BPZmYzHFcBVG-qou6MPDnBzmpgCdHV1NpT5QUkcIsxoCuwUQAvD_BwE) |
| Reckon  (Cont.) | [https://www.reckon.com/au/](https://www.reckon.com/au/accounting-software/?gclid=CjwKCAjw27jnBRBuEiwAdjQXDLAId6Z6tcx2BPZmYzHFcBVG-qou6MPDnBzmpgCdHV1NpT5QUkcIsxoCuwUQAvD_BwE) |
| MYOB | Easy online accounting software built for small business  The software comprises the following features/modules:   * Invoicing: * Bills and Expenses: * Payroll: * Business Insights: * Mobile Apps:   The software has the following features as listed on its website:   * No lock-in contracts, cancel anytime * 90 day money back guarantee * Phone and LiveChat support centres (Australia & NZ) * 100% cloud-based online accounting software with no installs or IT headaches. Updates happen automatically. * Auto backup up to the cloud with highest levels of data security – just like internet banking * Works in your web browser, on Mac, PC, tablet or mobile.     [https://www.myob.com/au/](https://www.myob.com/au/accounting-software/essentials?utm_source=google&utm_medium=cpc&utm_campaign=Brand-Essentials&utm_content=MYOB&ds_rl=1253176&gclid=CjwKCAjw27jnBRBuEiwAdjQXDNQaK_Y2ONATk8F133FfAP-YFXq_HHTq1ikU4f2DVSBMw8TSX4Pn8xoCX0UQAvD_BwE&gclsrc=aw.ds) |
| MYOB (Cont.) | [https://www.myob.com/au/](https://www.myob.com/au/accounting-software/essentials?utm_source=google&utm_medium=cpc&utm_campaign=Brand-Essentials&utm_content=MYOB&ds_rl=1253176&gclid=CjwKCAjw27jnBRBuEiwAdjQXDNQaK_Y2ONATk8F133FfAP-YFXq_HHTq1ikU4f2DVSBMw8TSX4Pn8xoCX0UQAvD_BwE&gclsrc=aw.ds) |

**Note to teacher/assessor**: The solution to Activity 2.1 is for your reference only – Do not provide a copy of this to the students

Students were informed in the SW there was no solution supplied to this activity – as it is part of their introductory research that will be used later when completing the research required for selecting, costing and proposing a cloud based service in assessment event 2.

You should provide students with an electronic copy of the Activity worksheet for Activity 2.1. They will want to adjust the table for the amount of detail they personally want to extract & record from the various cloud providers’ websites.



## Activity 2.2 – Cloud computing price comparison

Research the pricing for two of the major cloud based software options for small businesses in Australia, using the below links.

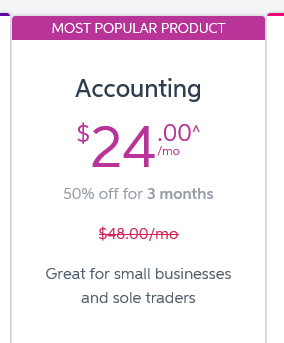
* [Xero accounting software prices](https://www.xero.com/au/try/accounting-software/?gclid=EAIaIQobChMIkdOepean2wIVj4qPCh3X3gVxEAAYASAAEgL1lPD_BwE&gclsrc=aw.ds&dclid=CPm3pKjmp9sCFQ99vQode1gAEg)
* [MYOB accounting software prices](https://www.myob.com/au/accounting-software/essentials)

Prepare a price comparison over a 12 month period to check what the price differences are between standard Xero and MYOB cloud based options.

Xero Standard costs - $50 per month x 12 = $600 per annum

MYOB costs - $48 per month x 12 = $576 per annum

NOTE at 14 June 2019 there is 50% off for the first three months, so therefore ($24 x 3) + ($48 x 9) = $504 per annum



## Activity 2.3: Answer in back of SW

## Activity 2.4: Cloud computing risks and opportunities

Note: This activity does not contribute to your final grade.

Consider any one cloud computing application or software. Provide a short response

(1-2 sentences) to each of the following e.g. MYOB

1. **A reason not to implement in your business.**

* existing software meets business’s needs,
* staff are trained to use existing software,
* have already purchased software as a one-off expense and don’t want to have to pay monthly subscription amounts

1. **A reason to implement in your business.**

* cloud version of the software is more up-to-date and is continuously maintained with updates,
* when commencing a software program from scratch it avoids an up-front payment for the software and the monthly fees (although ongoing) will be lower initially than a large capital expenditure outlay to buy the software,
* can access the software from

1. **A risk associated with implementation**

* Losing control of your data
* Problems accessing data if internet connections fail
* Survival of cloud providers

1. **An opportunity associated with implementation.**

* No large upfront costs
* Ability to expand operations and allow staff to work from a variety of locations

1. **An explanation as to whether or not you would implement the application.**

Accept Yes – benefits of easy access and updated software are most attractive

Or NO – already have fully functional software – don’t want to incur/lock-into additional monthly costs

## Activity 2.5: Cost Benefit Analysis

Access the following link to research the topic “[how is cloud computing cost effective](http://www.cetrom.net/uncategorized/how-is-cloud-computing-cost-effective)” and prepare a list of the benefits of cloud computing.

* Servers: With Cloud Computing, the need for and cost associated with on-premise servers vanish.
* Computers: The Cloud will help you extend the life of your computers, saving your company money in the long run.
* Employees: Because everything is hosted online, via the Cloud, your company will not need to hire an in-house IT staff.
* Maintenance and Downtime: Your Cloud provider will proactively monitor, maintain, and upgrade your hosted programs, minimizing downtime and ensuring your applications are available when you need them. And with less downtime, you’ll have increased productivity, higher revenue, and greater opportunities.
* Remote Access: Because applications are hosted in the cloud, employees can access information from anywhere, as long as they have an Internet connection.
* Scalability: Unlike an on-premise solution, the Cloud offers an extremely scalable platform that will grow alongside your business. Cloud Computing solutions allow you to easily adapt.
* Security: Many Cloud providers, like Cetrom, keep your critical data safe through secure and encrypted solutions, firewalls, backup recovery, and redundancy.

### Activity 2.6: review computing needs for business

| Type of Business entity | Common computer equipment | Critical information systems |
| --- | --- | --- |
| a medical centre | Computers  Printers  EFTPOS Machines  Scanners  Medical imagining equipment  Ultrasound  Diagnostic Equipment  ECG Equipment | Appointment booking systems  Patient Record systems  Medicare Processing systems and links  EFTPOS banking systems  Diagnostic software e.g. to detect skin cancers from scan  Email |
| a law firm | Computers  Printers  Photocopiers linked to networked computers | Appointment systems  Email  Word Processing to produce legal brief  Internet & legislation search software  Case Law Search software  Accounting software for client billings  Time Recording/Billing system to allocate lawyers time to client engagements  Tracking software on copiers to count copies to allow billing to clients for incidentals |
| a building firm | Computers  Printers  CAD Printers/Plotters  Measuring equipment  3D printers | Email for contact with clients, suppliers, local government bodies re. status of building approvals and approval requests/modifications  Word Processing  Spreadsheets to do costings  CAD Design software to allow building designs and plans to be printed and amended easily  Accounting software for client billings & purchasing and to maintain job costing records and client progress payments |
| an insurance company | Computers  Printers | Email  Word Processing software  Spreadsheet software  Access to specialised actuarial software programs to be able to make insurance quotes  Links to banking software  Customised insurance and risk management programs  Customer Policy Databases and claims history files and records |
| a retail business | Computers  Printers  EFTPOS machines  Product & Barcode Scanners  Barcode Printing systems  Labelling equipment  Electronic cash registers  Receipt printers  Touch screens  Credit card processing systems  Portable Data Collection Devices (PDAs) to track inventory, have customers sign for deliveries etc.  Online ordering equipment  Display Screens for customer collection/pick-up of goods | Email  Word Processing software  Spreadsheet software  Internet access & connections  EFTPOS systems linked to financial institutions to allow electronic payment methods for goods (most common way customers pay)  Accounting system  - Ordering/Purchasing system  - Sales system  - Payroll system  - Inventory recording and management system  Customer Relations Management Systems  Queuing systems i.e. take a ticket & wait for service (e.g. McDonald’s stores/banks/RTA Government Services centres)  Online ordering software |

## **Activity 3.1: Short term and long term goals**

Using the S.M.A.R.T goals principle, record below three goals (either short term or long term) that you would want to achieve when implementing cloud computing into your business.

Some examples include

Calculate the costs of the current IT system which is under review and prepare a report by the x day of x month of x year.

Ensure review of various cloud based accounting software options is undertaken by the project manager and a report prepared by the x day of x month of x year.

Ensure a cost benefit analysis is prepared x months prior to the implementation of the cloud computing to ensure adequate time to review and implement cloud solution.

Ensure relevant staff that will use the software attending 2 day training sessions one month prior to the implementation of the software.

## **Activity 3.2: The four phases of cloud transition**

Cisco outlines that organisations must approach the cloud transition in the following four phases:

1. Strategic preparation
2. Planning design
3. Implementation
4. Optimisation

These are explained in the following article on [developing a cloud computing strategy](https://www.cisco.com/c/dam/en/us/services/collateral/services/services-education/cloud_101_higher_education_wp.pdf). Refer to page 5 of this PDF article and summarise your understanding of the four phases of cloud transition.

1. Strategic Preparation

In this initial phase, IT decision makers will determine the appropriate cloud computing strategy, asking questions about architecture and security, as well as about objectives.

The costs, benefits, and operational changes required to successfully migrate to a cloud–computing model should also be evaluated, including both the current and desired services management approach. A thorough analysis helps align business results with subsequent cloud architectural development, tools, process integration, and implementation.

Strategic preparation should also target security. IT experts should evaluate their cloud services and architecture security risks, focusing on protecting access and providing on-demand security options within a services catalogue for their users. In addition, your strategy should take into account your cloud-computing evolution and post-deployment activities in every stage: strategy, planning and design, implementation, and optimisation.

2. Planning and Design

When undertaking a transition to cloud computing, strategic planning and design can help reduce the time to successful deployment and operation of complex cloud models. This phase requires expert coordination among the members of your team, your partners, and other vendors, as well as a detailed architecture design, data-center–specific expertise, and security designed from end to end.

The resulting designs and plans — including, for example, an end-to-end architecture blueprint, a migration roadmap, a common control framework, a security technology framework, physical safety and security, and your future cloud services evolution — should link back to your strategy and lay the foundation for subsequent implementation and integration.

3. Implementation

In order to reduce risk during a transition to cloud computing, organisations need to have someone with experience in providing a virtualized architecture, as well as integrated tools, a facilities plan, orchestration integration, workload migration, and staging and validation activities prior to full-scale implementation. This phase also involves implementing the security technology architecture, the security portal design, automated audit, and physical safety and security designs.

Proven methodologies, best practices, and deep knowledge of the core systems within the cloud environment can facilitate a smooth migration from your existing environment to a cloud utility computing architecture, while helping ensure adherence to plans and enabling on-time delivery of a fully implemented cloud-computing model. During this implementation stage, knowledge transfer should be an ongoing process, providing operational confidence for in-house experts.

4. Optimization

Optimization of the cloud model, which can accelerate adoption, is the point where you can maximize the true benefits of cloud computing: lower operating and capital expenses, increased business agility and responsiveness, and scalability.

This is done through activities such as:

1. Architectural reviews
2. Security audits
3. Cost-reduction exercises
4. Process improvements

## **Activity 4.1: Implementing cloud services**

The attached article from The Australian Government is [a guide to implementing cloud services](https://www.finance.gov.au/files/2012/09/a-guide-to-implementing-cloud-services.doc). Read the article and summarise the important steps you should take when implementing cloud services.

Identifying cloud opportunities

Assess suitability against business needs

Consider timing and triggers

Consider financial impacts

Consider organisational capability

Manage change

Review governance

Implementing a cloud solution

Build a business model

Assess the risks

Capture requirements

Build a business case

Prepare an exit strategy

Determine contractual terms

Approach the market

Select a provider

Plan for implementation and on-going operations

Review the implementation

# Appendix 2 – Activity Template

RESOURCE created for use in Session 3 (Week 3)

Template for Class Activity to be used in Session 3—Lesson 2 of 2 for the topic “Review computing needs for businesses”. Students have a copy in the SW p35-36

### Activity 2.6

| Type of Business entity | Common computer equipment | Critical Information Systems |
| --- | --- | --- |
| a medical centre |  |  |
| a law firm |  |  |
| a building firm |  |  |
| an insurance company |  |  |
| a retail business |  |  |

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## Additional Resources

### Historic development/evolution of computers

Use the links provided if you would like any further information on [the evolution of computers](https://www.slideshare.net/MukaleleRogers/102-evolution-of-computers) or [the history of information technology](https://www.slideshare.net/fhemrosacia/evolution-of-computer?next_slideshow=1).

#### Recommended Videos:

|  |  |
| --- | --- |
| Video Hyperlink Title | Full website reference |
| Computer Basics: What is the Cloud? | <https://www.youtube.com/watch?v=gu4FYSFeWqg> |
| On Premise VS Cloud Computing - Pros and Cons Comparison | <https://www.youtube.com/watch?v=KVydGQGR1Lo> |
| Cloud Computing Services Models (laaS, PaaS and SaaS explained) | <https://www.youtube.com/watch?v=36zducUX16w> |
| Cloud Computing Fundamentals | <https://www.youtube.com/watch?v=uroryFU78gM&feature=youtu.be> |
| Create a presentation in PowerPoint | <https://support.office.com/en-us/article/create-a-presentation-in-powerpoint-422250f8-5721-4cea-92cc-202fa7b89617> |
| The Beginner's Guide to Microsoft PowerPoint | <https://www.youtube.com/watch?v=XF34-Wu6qWU> |
| Learn PowerPoint - 2018 Beginners Tutorial | <https://www.youtube.com/watch?v=u7Tku3_RGPs> |