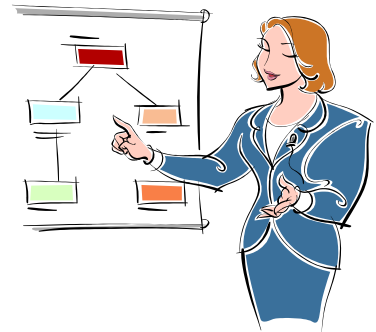# Computer-Assisted Work Tools for Transportation and Logistics
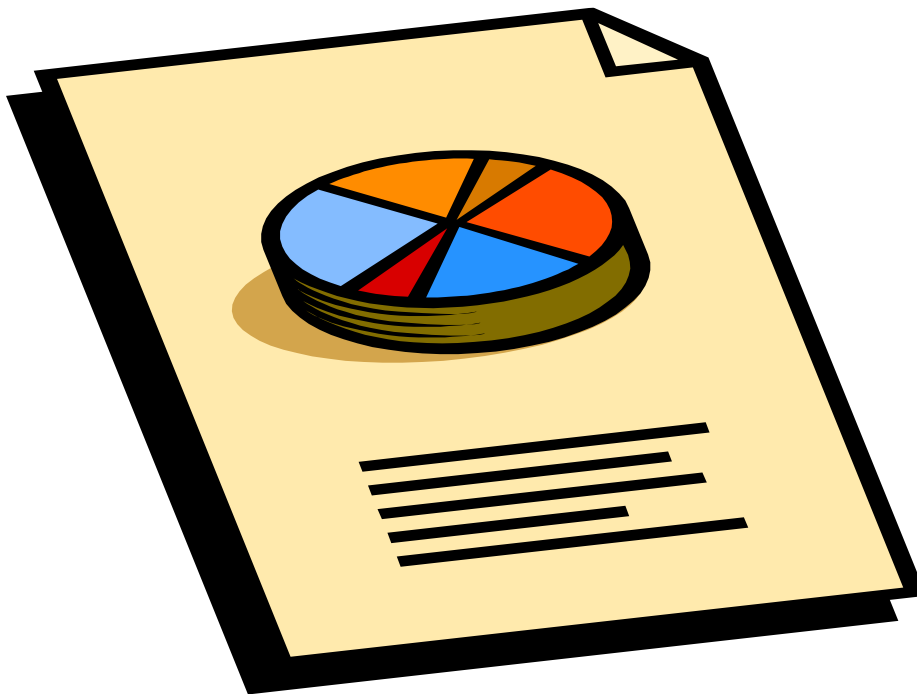
Writing Business Communications, Using the Computer to Store and Retrieve Data, Writing Reports, Presentation Skills and Excel

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Preparing Reports

The Planning, Researching, Structuring and Formatting of Reports

Andy Brown, June, 2018

Contents

1. Introduction: What is a Report?

There are many different types of report, but most reports have similar features:

- They include a series of **facts** based on **evidence**
- The information included **can** usually **be checked**
- The information is **ordered** in a way that is the **most useful** to the **reader**
- The reports **follow** special rules or **conventions** on how the information is **ordered** and **presented**
- They are usually aimed at **readers** with a **specific interest** in the subject of the report

2. Types of Reports

There are many different types of business report. Below is a list of different types of reports and their features:

Report Type	Function	Audience	Format/Features
Computer/Data Report	- Gives quick visual overview of data	- Mainly internal - Decision-makers and process monitors	- Mainly graphs from databases - Limited description and analysis - Often created from specialist software - Rarely involves conclusions and recommendations
Incident Report	- Gives quick overview of event: no human injuries	- Mainly internal - Decision-makers and process monitors	- Strongly fact based: 5 W's - Documents non-routine situation - May be used to detect emerging problems - May use standard format - Occasional conclusions and recommendations
Accident Report	- Gives quick overview of event: human injuries	- Mainly internal - Decision-makers and process monitors	- Strongly fact based: 5 W's - Documents non-routine situation - May be used to detect emerging problems - May use standard format - Occasional conclusions and recommendations - Part of health and safety/legal documentation
Periodic Report	- Gives quick picture of routine processes and situations	- Mainly internal - Decision-makers and process monitors	- Documents routine situations - Uses standardized format to make comparing and monitoring easier - Does not include conclusions and recommendations
Progress Report	- Gives picture of non-routine processes and situations	- Mainly internal, but can be external for clients - Decision-makers and process monitors	- Documents non-routine situations - Used to inform whether the project is on schedule, and if not, why not - Sometimes uses standardized format - Does not include conclusions and recommendations
Memo Report	- Gives picture of non-routine processes and situations	- Mainly internal - Decision-makers	- Longer than a standard memo - More structured than a standard memo: sections/headings - May include conclusions and recommendations

Report Type	Function	Audience	Format/Features
Letter Report	- Gives picture of non-routine processes and situations	- Mainly external - Decision-makers	- Longer than a standard letter - More structured than a standard letter: sections/headings - May include conclusions and recommendations
Justification Report	- Presents an argument for change	- Mainly internal - Decision-makers	- Establishes the reasons for change - Reasons are based on research or costing - Will include conclusions and recommendations - A mini proposal
Accountability Report	- Gives picture of routine processes and situations	- Mainly external - Regulators	- Tax, environmental, equal opportunity, health and safety, industry compliance reports - Usually submitted periodically - May use standardized format - Rarely includes conclusions and recommendations
Annual Report	- Gives account of the organization's operation	- Mainly external: Shareholders, stakeholders and staff	- May be elaborately designed with high production values - Meets legal requirements for accountability - May not include any conclusions or recommendations
Proposal, Tender, Submission	- Presents a case for change	- Internal or external - Decision-makers	- Similar features to an analytical report - Used in competitive bidding situations
Research or Analytical Report	**- Gives detailed analysis of a situation**	**- Mainly internal** **- Decision-makers**	**- May be long: 1000 words+** **- May involve considerable research** **- Involves analysis as well as description** **- Format and structure are created by the writer; but will normally follow writing conventions** **- Will give conclusions and usually recommendations**

We are going to work through the process of creating an **Analytical Business Report** for **Evaluation Task**.

3. Structure/Order of a Research/Analytical Report

Order in Report	Order Written	Executive Reads	Features
Title/Cover Page	8	- Always	- Title should summarize the purpose & content
Contents Page	7	- Sometimes	- Shows report structure - Shows page numbers
1. Executive Summary	6	- Always	- A summary of the report: Introduction, Results, Conclusions, recommendations
2. Introduction	1	- Sometimes	- Background - Purpose - Scope - Research methods - Limitations
3. Results Findings Discussion Main Body	3	- If interested in the research	- Organization and argument developed logically - Factual, no opinions - Balanced approach: no bias
4. Conclusions	4	- If surprised by conclusions	- Based on results, summarizes results
5. Recommendations	5	- Nearly always	- Based on results/conclusions
6. Bibliography	2 Write as you research	- If the report shows areas that need further investigation	- Follow citation rules What + where + when
7. Appendices	2/3 Include as you write	- Rarely	- Order and label
8. Glossary	2/3 Write as you research	- Rarely	- Define terms
9. Index	7	- Rarely	- Only used in very large reports

Evaluation Task 4 will not need an **Executive Summary, Index** or **Glossary.**

4. Planning and Research

Project Management
Any project can be split into logical stages/steps that allow us to work effectively and efficiently. In this section of the course, we will briefly review the stages for project management and follow them for a specific project: Evaluation Task 5: Analytical Business Report

Project Stages
These are the basic steps in any project:

Stage 1:	**Commissioning/Defining**
Stage 2:	**Planning**
Stage 3:	**Researching**
Stage 4:	**Implementing, doing (writing)**
Stage 5:	**Reviewing (editing)**
Stage 6:	**Delivering**
Stage 7:	**Feedback**

Commissioning, **planning** and **researching** are the **most important parts** of the **report writing process** (or any project) and can and should take about 60% of the total time for the project. Time spent at this stage of the report writing process (or any project) will save you lots of time later and will allow you to produce a useful report (project).

Stage 1 of a Project: commissioning, defining terms of reference, needs assessment

Basically, this is finding out:
  ➢ **Who** the project is for?
  ➢ What is the **objective**/goal/result/outcome of the project?

4.1 Commissioning the Report
This is to define what is to be reported on.
  • This is the same as defining the **person, purpose and main points** in the email writing section of the course

- **Background:** Person/Company/Organization
  - ➢ Who is the report for?
    - ▪ Internal
    - ▪ External
    - ▪ Status/Authority
    - ▪ Specialist knowledge
    - ▪ Bias/preferences/needs/concerns: **Hot Buttons!**
- **Purpose**
  - ➢ What is the report trying to find out?
    - ▪ Try to write one or two sentences to define the objective of the report
    - ▪ Ask the person who commissioned the report lots of questions to define the **exact** purpose of the report
    - ▪ In business the purpose normally answers the question: "Which is the best?"… product, service, option, strategy

- **Scope:** Identify what **information** needs to be included in the report to achieve the **purpose** for the specific audience: **person**(s)
  - ➢ What information **will** be included in the report?
  - ➢ What information will **not** be included in the report?
  - ➢ Is the information available and from where?

Once we have clearly defined **who** we will write the report (or do any project) for, what the **objective** of the report (or any project) is and **what information** (or resources) we need to complete the report (project), we can then start to **plan** our report (project).

Stage 2 of a Project: Planning

Planning allows us to organize the work for any project. The aim is to split a complex project into **stages** or steps and complete each step in a **logical order** and in a **realistic time** that allows you to **deliver** the project **on time**. This is so that you work efficiently and don't waste time.

4.2 Preliminary Research

Sometimes we are asked to write a report or complete a project on a subject we **haven't done before**. In these situations, it is a very good idea to do some **preliminary research**. The aim is to see **how easily** we can find the information (or needed resources) so that we can **get a better idea about how long** the report will take to write or the project will take to complete. This will allow us to create a **realistic/more accurate work schedule** so that we can meet our deadline and **don't waste time researching irrelevant data**.

4.3 Creating a Work Schedule

An essential part of project management is working out **how** to complete the project.

- ➤ **What** are the steps/stages of the project?
- ➤ What **order** should the steps/stages be done in?
- ➤ **How Long** will each step/stage take? What are our **deadlines**?

This is especially important for team projects where you also have to answer
- ➤ **Who** will do what, when?

Remember, creating a work schedule allows us to split a complex project into stages or steps, complete each step in a logical order and in a realistic time that allows you to deliver the project on time. This is so that you **work efficiently** and **don't waste time**.

4.4 Creating a Report Outline

During the planning stage of writing a report, you should also produce an **outline** of the report. A report outline is basically a skeleton of your report. A report outline has the following main uses:

1. It is a **check** that you are answering the **question** (purpose) of the report with the **right information**
2. It allows you to think about the best way to **organize** the **information** to **meet** the **purpose** for the **person**(s)
3. It is used to **build your report** as you **collect your information** from your **research**

- The outline should include the sections/headings, and sub-sections/sub-headings of the report
- The outline should include a description of the information that will go in each section/sub-section
- The outline should be close to the final structure of the report
- During the research stage of the report writing process it is normal to change the organization of the outline

An analogy for a report outline in a construction project, would be to create a demonstration model. For example, the proposed wall between the US and Mexico. Or, if you wanted to cook a special meal for a loved one, you might practice the meal before the special day.

Stage 3 of a Project: Researching

This can be done after you have done the commissioning and planning. You now know what the question/objective is and what information/resources you will need to complete the project.

4.5 Researching

This will allow you to:

- Identify the sources of information that will allow you to find the content of the report. This could be:
  - ➢ Your expertise
  - ➢ Colleagues expertise
  - ➢ In-house information
  - ➢ Libraries and librarians
  - ➢ Books
  - ➢ Journals/periodicals/government reports/newspapers
  - ➢ Online sources
    - ▪ Internet
    - ▪ Use different search engines
    - ▪ Try different "key words"
    - ▪ Be careful with bias
  - ➢ Questionnaires: Primary data (or secondary)
  - ➢ Surveys: Primary data (or secondary)
  - ➢ Interviews: Primary data (or secondary)
- Start your research by using secondary sources as they are quicker and cheaper to access. We will be using **secondary sources** to create your report.
- Keep a list of where you found the information. This will allow you to create your **bibliography**. Produce a "resources" folder or file for each report. You should **write** your **bibliography at the same time** as you do your **research**. This will save you time: sometimes it is very time consuming to find where you found a source of information.
- Will the report be produced individually or in a group? If it is produced in a group, who will do what and by when?
- **As you collect your data**, you can add it to your **Report Outline** in the relevant section/sub-section

5. Features of the Different Sections of a Report

Stage 4 of a Project: Implementing (writing)

This can be done after you have done the commissioning, planning and researching. You now know what the question/objective is and what information/resources you will need to complete the project and have collected the data to include in the report/resources for the project.

The information in this section of the manual will allow you to learn the features of the different sections of an analytical business research report. This will be particularly useful for completing **Evaluation Task 4: Report Outline**.

5.1 Title/Cover Page

- The title/cover page should clearly describe the **purpose** of the report: objective/aim
- The title/cover page should **summarize** the **content** (**points**) of the report
- Write the title/cover page **after** you have completed the report
- The title page **does not** have a section number
- Should include the:
  - Name of author(s)
  - Name of company
  - Date completed

5.2 Contents Page

- All sections and sub-sections of the report should be included with page numbers
- Don't include: Title/cover page and memo/letter of transmittal
- Write **after** report is complete as the page numbers will now be correct: you don't waste time
- The contents page **does not** have a section number

5.3 Executive Summary

- This should **summarize** the **entire content** of the report:
  - ➤ *Introduction*: Summary of Purpose, Scope, Research Methods
  - ➤ *Results*: Often graphics from the conclusion can be used
  - ➤ *Conclusions*
  - ➤ *Recommendations*
  - ➤ It can only be written **after** the *above sections* are completed

- The executive summary should be brief, no more than 10% of the report
- The executive summary should be very good as this is the only section that most readers will read
- This is the first main section of the report

5.4 Introduction

Sub-sections of the Introduction

- **Background**
  - ➤ Why was the report commissioned? **Who** was the report commissioned for?
- **Purpose**
  - ➤ **What** is the purpose/objective/goal of the report? What is the question to be answered in the recommendations?
- **Scope**
  - ➤ What information is **included** in the report?
  - ➤ What information is **not included** in the report?
- **Research methods**
  - ➤ How/where was the data obtained?
  - ➤ How was the **data calculated** or **estimated** or **analyzed**?
- **Limitations**
  - ➤ What limitations were there? (Time, resources, data)
  - ➤ Does the data limit the report in any way? Was any data estimated?

- **Definition of terms**
  - ➢ Do technical terms need defining for non-specialist readers?
  - ➢ If you have a lot of technical terms, create a glossary

This is the most important section of any report as it explains everything that you have done: how you created the report. It should be **written first** as a **final check** that you are **answering** the **right question** (purpose), with the **right information** (scope/points), with the **right method** (research methods) for the **right person** (background).

5.5 Results/Findings/Discussion/Main Body
- This will be the largest section of the report
- This normally contains graphics: bar charts, tables, images…
- You have to decide on the **most logical order and organization** of the data to achieve your purpose: this will be done in Evaluation 4: Report Outline
- This section will be divided into **sections** with headings (normally the main **categories** of the report) and **subsections** (normally the **criteria** used to compare the categories) with subheadings
- You can discuss a range of options in this section. You can then refer to these options in the recommendations section of the report
- Only state facts: opinions can be given in the recommendations section of the report
- You write this **after** the Research stage of the project as you now have the data to include in your report

5.6 Conclusions

- Your interpretation/**summary of the results** of the reports
- This normally contains graphics: bar charts, tables…
- Use facts supported by the results section of the report
- Don't give opinions
- Don't include information not included in the report
- Can only be written **after** the results have been completed

5.7 Recommendations

- You propose specific actions that are supported by your conclusions, which are supported by the results of the report
- Don't include information not included in the report
- You can number and prioritize your recommendations

5.8 Bibliography

- Lists all the materials you have referred to in your research and used in the report
- Follow the conventions of your organization for citing references and producing bibliographies
- Include **what** data was collected, **where** you collected it and **when** you collected it

What + Where + when

For Example:

Cargo Vans
GMC Savannah data retrieved from www.gmc.ca/trucks on October 17, 2017.
Ford Transit data retrieved from www.ford.ca on October 23, 2017.

5.9 Appendices

Include reference material that is too big to go in the findings section of the report
- Examples:
  - ➤ Raw data
  - ➤ Questionnaires, Interview transcripts
  - ➤ Maps
  - ➤ Legislation appropriate to the report
  - ➤ Historical background
  - ➤ Complex graphics

➢ Videotape

Basically, anything that does not fit neatly in the structure of the written report.

- **Only** include information that is useful to the reader
- Label the different sections of the appendix: Appendix A, B, C… or Appendix I, II, III…

5.10 Glossary, List of Abbreviations and Index

- You will only need to include these in large reports

A glossary **will not** be needed for Evaluation 4.

6. Graphics

Graphics are any images: they could be bar charts, line graphs, pie charts, photos, tables. Only include graphics that will **help the reader understand the report better.** Graphics can be a very powerful visual aid.

- Graphics should reduce the need for writing
- Plan where to insert graphics when you create your **Report Outline**
- **Label** all graphics: **title**, **axis**, Figure 1, 2 ,3 and **highlight key features/data** in your graphics
- Don't put too much information in the graphics
- Graphics should be easy to read
- Don't use too many graphics: only use them for key points
- Types of graphics:
  - ➢ **Bar chart**: single, multiple, cumulative
  - ➢ Pie chart
  - ➢ Line graph
  - ➢ Flow charts
  - ➢ Decision charts
  - ➢ Scattergrams
  - ➢ **Tables**
  - ➢ **Photographs**
  - ➢ Gantt charts: used for scheduling/project planning

Each graphic type is specifically designed for different types of data. You need to match the correct graphic type to the data type.

Word has an impressive selection of graphics that can be inserted into documents. Click on **"Insert"** in **Word** to see what tools are available. **SmartArt** might be useful for your report and could be particularly useful for your Presentation Slides. These tools are quick and easy to learn and make your report look professional. During the classes, I will briefly review best practice conventions for the use of a range of graphics that you will use in your reports. **YouTube** is the best place to learn how to use any computer programs.

7. Formatting your Report

The key words here are **readability** and **consistency**.

- **Fonts**
  - ➢ Size
  - ➢ Type
  - ➢ Spacing

- **Margins**
  - ➢ Size

- **Headings/subheadings**
  - ➢ Size
  - ➢ Ordering/labeling
  - ➢ The reader should be able to read the headings and understand the whole report

1. Executive Summary (16-point font)

1.1 Introduction (14-point font)

1.2 Results
Text = 12-point font

1.3 Conclusions/Recommendations

- **White Space**
  - ➢ Use to make information easier to read
  - ➢ Keep spacing consistent

- **Indenting**
  - ➢ To highlight information

- **Bullets**
  - ➢ To highlight information
  - ➢ To rank options
    1. Ford
    2. GMC
    3. Volvo
  - ➢ To give steps/stages

- **Bold**/<u>Underline</u>/*Italics*/CAPITALS
  - ➢ To highlight information

- **Paragraphing and Page numbering**
  - ➢ Consistency: use Justify paragraph alignment
  - ➢ Page number should not be on Title Page. **Insert** Cover Page to make page numbering easier
  - ➢ **Change** Paragraph spacing to 0 before and after. This will help you when you insert graphics
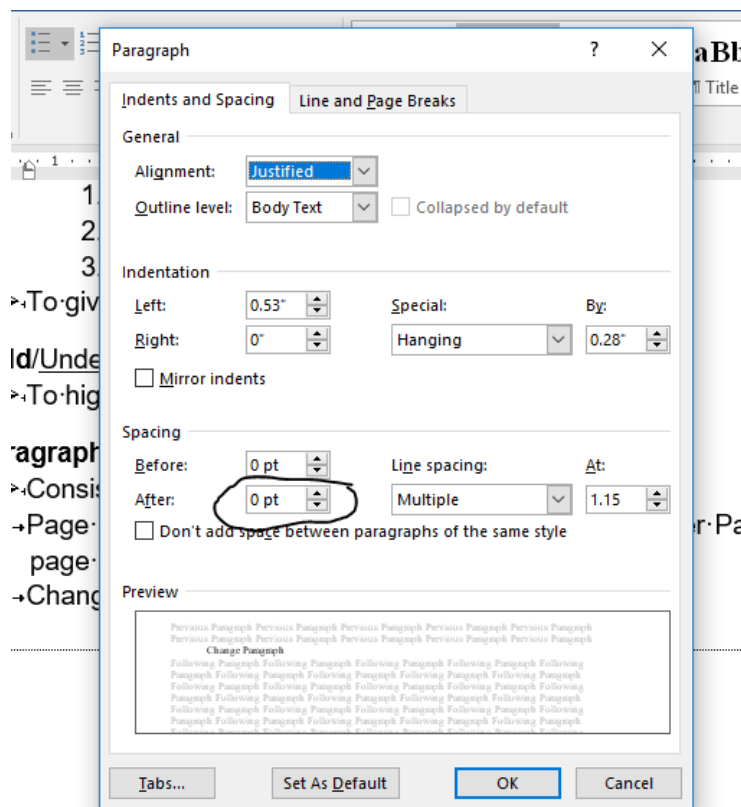
8. Language Use

Your goal is to produce **clear**, **concise** and **factual** writing that achieves the **purpose** of the report.

- **KISS**: **K**eep **I**t **S**imple and **S**hort
- Use facts, not opinions

Stage 5 of a Project: Reviewing (editing)

This should be done after you have completed the Introduction, Results, Conclusions, Recommendations and Executive Summary. You should always review any project before you deliver it to ensure a high-quality product/outcome.

9. Editing

Follow the editing guidelines we reviewed before.

Remember to allow time between the writing stage of the report and the editing stage.

1. Check the structure
2. Check the content
3. Refine sentence structure and word choice
4. Check the mechanics: spelling, punctuation and grammar
5. Check for consistency in formatting
6. Check referencing

At this stage, it is a very good idea to get feedback from colleagues to ensure that you deliver the best product: in this case your report.

Stage 6 of a Project: Delivering

Once you are convinced that you cannot make your product any better in the time that you have, you should deliver your project **before** or **on** the **deadline**.

For your **Report** it is strongly recommended that you don't wait until the delivery date to print your work. Do it the day before. This will keep your stress levels down!

Stage 7 of a Project: Feedback

In the basic introduction to project management we have seen in this course, feedback comes at the end. However, feedback occurs **at every stage of a project**:

Stage 1: Commissioning: During this stage, it is common to adapt our understanding of the project as we gain a better understanding of the task

Stage 2: Planning: As we plan our project we might have to adapt the scope of the work based on the time and resources we have available

Stage 3: Researching: As we collect our data we might have to adapt the scope and purpose of the work based on the resources that are available

Stage 4: Implementing: We may have to adapt our planning as the task itself gives us feedback. For example, deadlines might need to be adapted

Stage 5: Reviewing: We may think of a better way to organize the data to produce a better product

Stage 6: Delivering: For example, as you deliver a presentation, you receive immediate feedback on your presentation

Stage 7: Post-Delivery Feedback: This will be explained in section 10 below

10. After the Report is Submitted

It is important to try to get feedback on your report. This will allow you to write better reports next time.

- Does your audience like the report? Why?
- Does your audience hate the report? Why?
- Network and "sell" your report

- Sometimes you will have to present your report to your audience: this is very common in business

Conclusion

Feedback is an essential part of project management. Although we have reviewed project management as a **linear process**, it is actually an **iterative** or **recursive** process. This means that we might need to go back to earlier stages of a project to adapt them. This is completely normal in project management and must be done as it ensures a quality finished product.

Think of the development of any product and how it has changed over the years. A TV still has the same basic purpose (use) as it did when it was first invented, but a TV today is very different from in the past. The same can be said of cars, medical procedures and any other human progression.