

Technology Strategy Workbook - Quick User Guide

Getting Started

The Technology Strategy Workbook is an application implemented as a single Excel 2007 workbook.

Before starting a project it is important that you take a backup copy of the original “master” workbook and keep this in a safe place.

To start a new project simply take a copy of the “master” workbook and give the file a suitable name.

When you open the workbook you should see a *Technology Strategy* tab on the main menu. This menu option gives you access to all the Technology Strategy main functions.

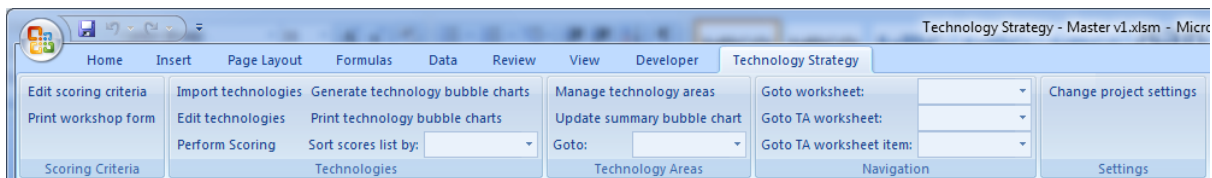


Fig 1. Technology Strategy menu

Workbook Protection

With the exception of one or two cells all worksheets and cells are protected to prevent their content being changed which may break workbook functionality. Most cells allow their formatting to be changed.

Worksheet content is created by accessing the menu functions and using the Technology Strategy forms.

The content of some cells may be edited directly. Where this is the case these cells are clearly labelled in the workbook.

Backups

There is no built-in automatic backup functionality apart from the standard backup functions provided by Excel.

You should regularly use the *Excel->Save* function to save any unsaved changes to the workbook. Some Technology Strategy dialog forms provide a *Save File* to allow you to save any unsaved changes.

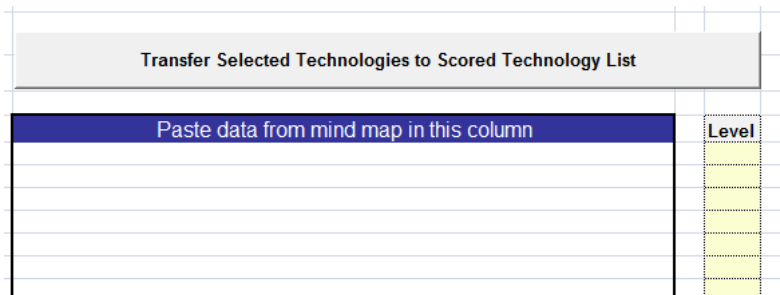
It is also strongly recommended that you regularly take backups of the project workbook to help avoid losing any work.

Importing Technologies

Technologies can be imported from another application, such as a mind-mapping tool, using cut-and-paste or by typing directly into the input area of the *Input Sheet*.

To import technologies select the *Import technologies* option from the *Technology Strategy* menu. You will be prompted to follow the instructions on the *Input Sheet*.

Enter all technologies into the input area of the *Input Sheet*. Technologies to be imported must have an asterix (*) suffix. You may select/de-select technologies to be imported by manually adding /removing this suffix.



The screenshot shows a spreadsheet interface. At the top, there is a grey header bar with the text "Transfer Selected Technologies to Scored Technology List". Below this is a table with a blue header row containing the text "Paste data from mind map in this column". To the right of this table is a column labeled "Level" with a yellow background. The table has several empty rows below the header.

Fig 2. Input Sheet

Each technology will be given a *level* reflecting its position within the technology hierarchy. *Level* is determined by the indent-level (number of spaces) before the technology name. A *Level 0* technology is the top-most technology and will not be imported. *Level 1* technologies represent *consumer needs*, which is used a grouping mechanism in the workbook.

To import the highlighted technologies select the *Transfer Technologies...* button on the *Input Sheet*. A confirmation message should appear on completion.

Re-importing Technologies

Technologies may be re-imported at any time. You may want do this if the list of technologies changes. Follow the import procedure described above to re-import the technology list.

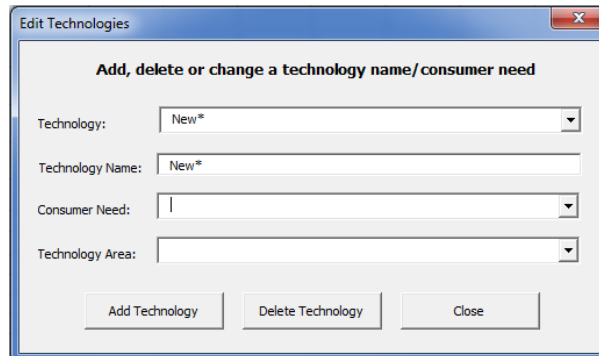
No technology scores or technology area assignments will be lost when a technology with the same name is re-imported.

Note that any technology that has been added manually using the *Edit Technologies* menu option (see below) will be lost when technologies are re-imported.

Adding, Editing or Deleting Technologies

Technologies may be added, edited or deleted at any time following import.

To add, edit or delete a technology select the *Edit technologies* menu option. The *Edit Technologies* dialog will appear.



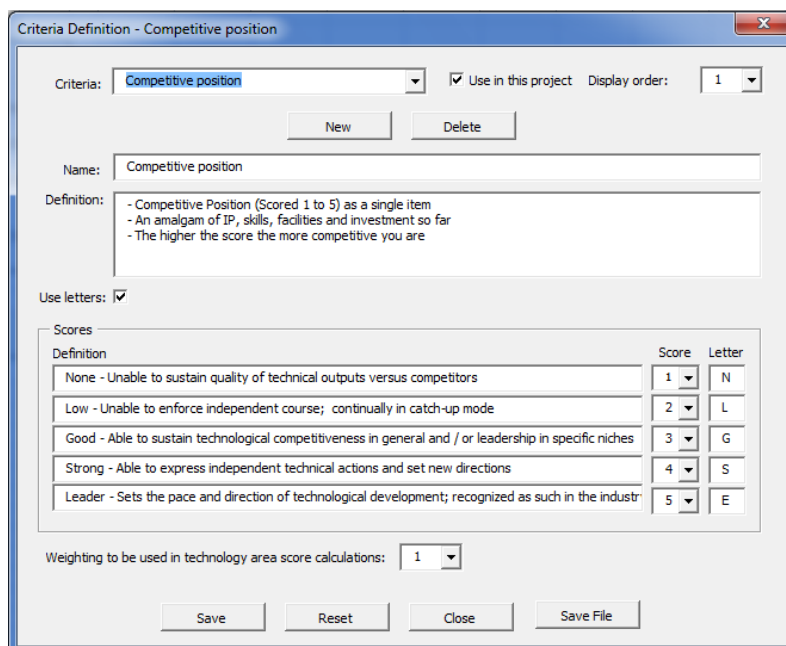
The dialog box is titled "Edit Technologies" and contains the following fields and buttons:

- Technology: [New*] (dropdown)
- Technology Name: [New*] (text input)
- Consumer Need: [] (dropdown)
- Technology Area: [] (dropdown)
- Buttons: Add Technology, Delete Technology, Close

Fig 3. Edit Technologies dialog

Editing Scoring Criteria

The workbook is provided with a set of pre-defined scoring criteria. To add, edit or remove criteria select the *Edit scoring criteria* menu option. The *Criteria Definition* dialog will appear.



The dialog box is titled "Criteria Definition - Competitive position" and contains the following elements:

- Criteria: [Competitive position] (dropdown)
- Use in this project
- Display order: [1] (dropdown)
- Buttons: New, Delete
- Name: [Competitive position] (text input)
- Definition: [- Competitive Position (Scored 1 to 5) as a single item
- An amalgam of IP, skills, facilities and investment so far
- The higher the score the more competitive you are] (text area)
- Use letters:
- Scores table:

| Definition | Score | Letter |
|--|-------|--------|
| None - Unable to sustain quality of technical outputs versus competitors | 1 | N |
| Low - Unable to enforce independent course; continually in catch-up mode | 2 | L |
| Good - Able to sustain technological competitiveness in general and / or leadership in specific niches | 3 | G |
| Strong - Able to express independent technical actions and set new directions | 4 | S |
| Leader - Sets the pace and direction of technological development; recognized as such in the industry | 5 | E |

- Weighting to be used in technology area score calculations: [1] (dropdown)
- Buttons: Save, Reset, Close, Save File

Fig 4. Criteria Definition dialog

Note that you will not be allowed to remove criteria that appear on any of the pre-defined bubble chart templates. A warning message will appear if you try to do this.

Printing a Workshop Form

The workshop form contains a list of all criteria definitions in a printable form intended for use in a workshop.

To print a workshop form select the *Print workshop form* menu option. The workshop form will appear.

The screenshot shows an Excel spreadsheet with a workshop form overlaid. The form is divided into two main sections: 'Competitive position' and 'Business attractiveness'. Each section contains a text box with instructions and a grid of options with corresponding letter or number buttons.

| Section | Text | Options |
|-------------------------|--|---|
| Competitive position | - Competitive Position (Scored 1 to 5) as a single item - An amalgam of IP, skills, facilities and investment so far - The higher the score the more competitive you are | None - Unable to sustain quality of technical outputs versus competitors (N) |
| | | Low - Unable to enforce independent course; continually in catch-up mode (L) |
| | | Good - Able to sustain technological competitiveness in general and / or (G) |
| | | Strong - Able to express independent technical actions and set new directions (S) |
| Business attractiveness | - Competitive Position (Scored 1 to 5) as a single item - An amalgam of IP, skills, facilities and investment so far - The higher the score the more competitive you are | None - very low growth (1) |
| | | Some - would contribute as part of building an overall portfolio (2) |
| | | Good - similar to other product opportunities that you are currently selling (3) |

Fig 5. Workshop form

Use the Excel print option to print the form.

Scoring Technologies

To score technologies select the *Perform scoring* menu option. The *Score Technologies* dialog will appear.

The screenshot shows the 'Score Technologies' dialog box. It features a 'Technology List' on the left, which is currently empty. On the right, there are several scoring criteria, each with a set of checkboxes for selecting a score from 1 to 5.

| Criteria | Options |
|---------------------------|--|
| Competitive position | <input type="checkbox"/> N <input type="checkbox"/> L <input type="checkbox"/> G <input type="checkbox"/> S <input type="checkbox"/> E |
| Business attractiveness | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| Fit with BU Strategy | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| Maturity of technology | <input type="checkbox"/> E <input type="checkbox"/> G <input type="checkbox"/> M <input type="checkbox"/> G |
| Impact on competitiveness | <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> E <input type="checkbox"/> R |
| Investment required | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |
| Feasibility | <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 |

At the bottom of the dialog, there are 'Close' and 'Save File' buttons.

Fig 6. Score Technologies dialog

Highlight a technology in the *Technology List* and use the checkboxes to enter scores. Scores are automatically saved to the workbook as each box is ticked.

Generating Technology Charts

Technology bubble charts should be generated once scoring is complete. These charts are based on pre-defined templates within the workbook. A separate set of charts is generated for each consumer need.

To generate technology charts select the *Generate technology bubble charts* menu option. The bubble charts will appear on the *Technology Charts* worksheet.

These charts may take a minute or two to generate depending on the number of technologies and the performance of your PC.

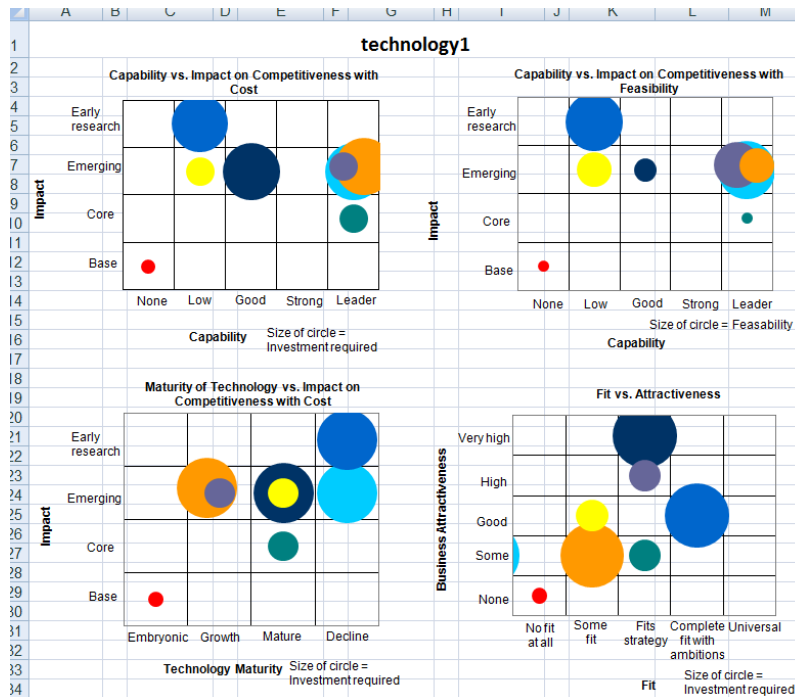


Fig 7. Technology Charts

Note that these charts do not automatically update when technology scores change. The charts should be regenerated by re-selecting *Generate technology bubble charts*.

Printing technology bubble charts

To print the technology bubble charts select the *Print technology bubble charts* menu option. The *Print Bubble Charts* dialog will appear.

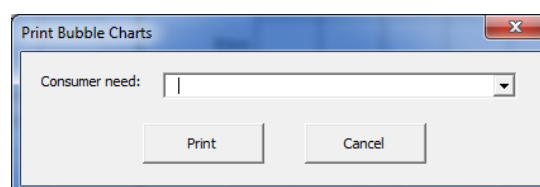


Fig 8. Print Bubble Charts dialog

Select a consumer need and then select the *Print* button.

Prioritising Technologies

Technology prioritisation is performed by sorting the technologies on the *Scored Technology List* worksheet.

To sort technologies select an option from the *Sort scores list by* dropdown.

Technologies may be sorted by:

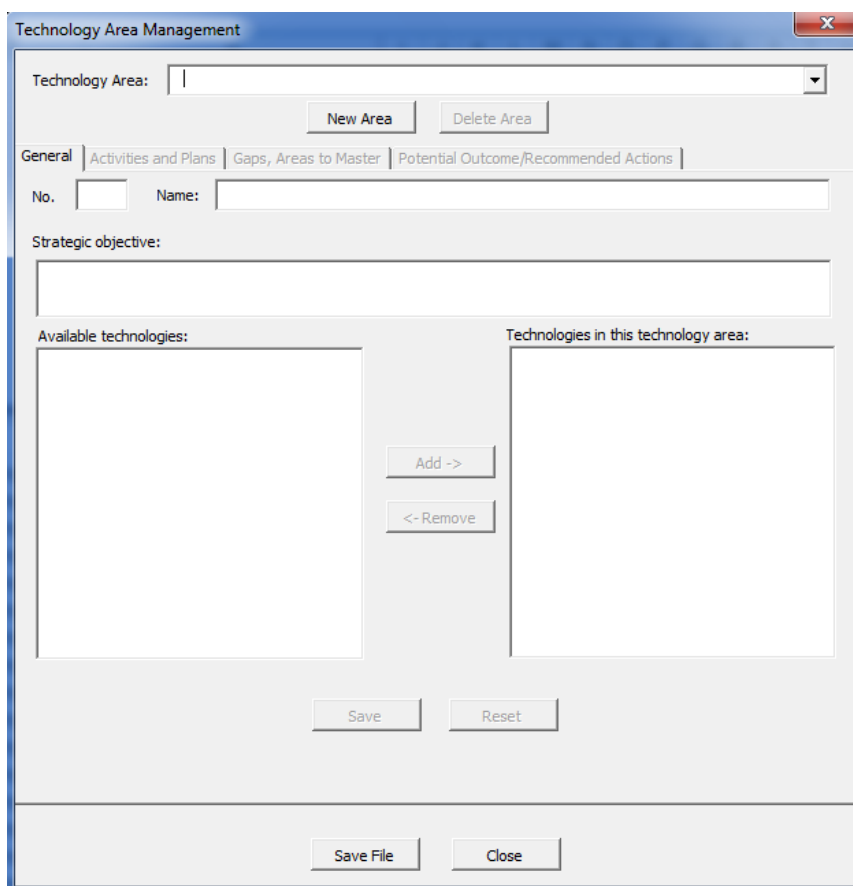
- Technology name
- Total score
- Consumer need and total score

Managing Technology Areas

Creating a technology area

Up to 15 technology areas may be created each containing up to 10 technologies.

To create a technology area select the *Manage technology areas* menu option. The *Technology Area Management* dialog will appear.



The screenshot shows a software dialog box titled "Technology Area Management". At the top, there is a "Technology Area:" dropdown menu, a "New Area" button, and a "Delete Area" button. Below this is a tabbed interface with four tabs: "General" (selected), "Activities and Plans", "Gaps, Areas to Master", and "Potential Outcome/Recommended Actions". Under the "General" tab, there are input fields for "No." and "Name:", a "Strategic objective:" text area, and two list boxes: "Available technologies:" and "Technologies in this technology area:". Between these list boxes are "Add ->" and "<- Remove" buttons. At the bottom of the dialog are "Save" and "Reset" buttons, and at the very bottom are "Save File" and "Close" buttons.

Fig 9. Technology Area Management dialog

Select the *New Area* button to create a new area. Add or remove a technology by highlighting the technology and selecting the *Add* or *Remove* button.

Select the *Save* button to save the area.

Note that a technology can only belong to one technology area.

Project and Resource Planning

To create project activities and assign resource for a technology area select the *Activities and Plans* tab of the *Technology Area Management* dialog. The *Activities and Plans* dialog will appear.

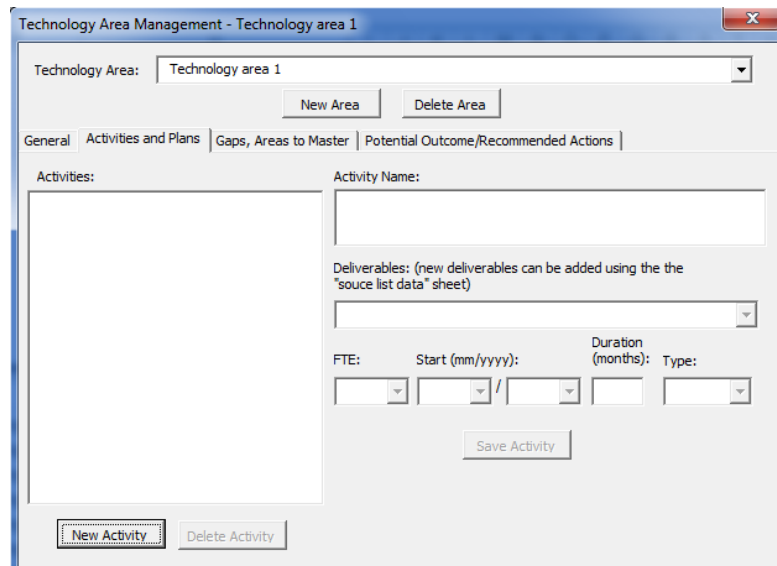


Fig 10. Activities and Plans dialog

Select the *New Activity* button to create a new activity.

To save the activity select the *Save Activity* button.

Identifying Gaps and Areas to Master

To create gaps and areas to master for a technology area select the *Gaps, Areas to Master* tab. The *Gaps, Areas to Master* will appear.

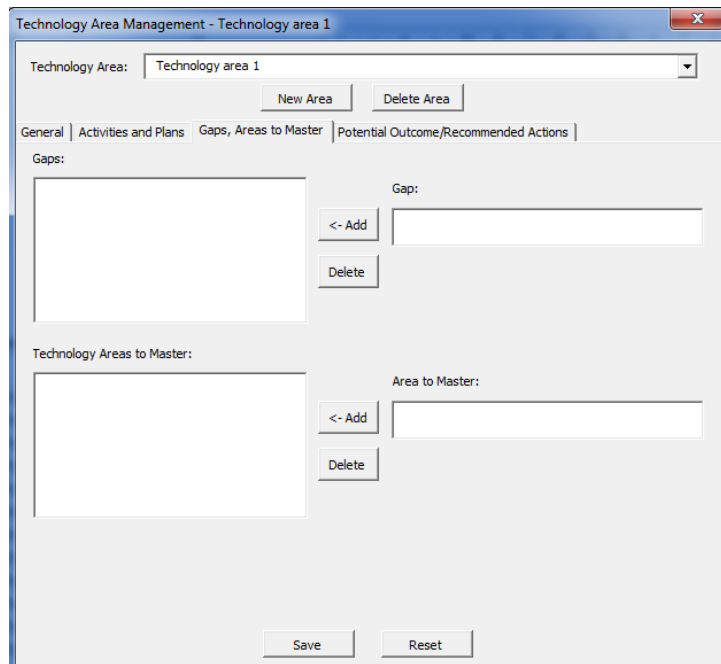


Fig 11. Gaps, Areas to Master dialog

Use the *Add* and *Delete* buttons to add/remove gas and areas to master for the selected area.

To save changes select the *Save* button.

Setting Potential Outcome and Recommended Actions

To set potential outcome and recommended actions for a technology area select the *Potential Outcomes, Recommended Actions* tab. The *Potential Outcomes, Recommended Actions* dialog will appear.

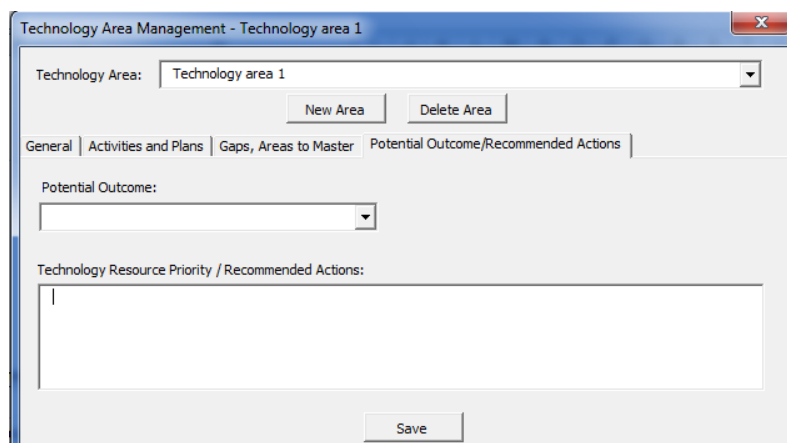


Fig 12. Potential Outcomes, Recommended Actions dialog

To save changes select the *Save* button.

Changing Gantt Start Date and External Resource Cost

To change the Gantt start date and external resource cost select the *Change project settings* menu option. The *Change project settings* dialog will appear.

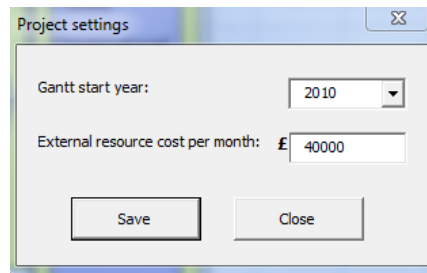


Fig 13. Change project settings dialog

To save changes select the *Save* button.

Note that changing the Gantt start date will automatically change the Gantt charts on worksheets *Summary Gantt Chart* and all *TA(n)* worksheets.

Workbook Structure and Navigation

Workbook Structure

The Technology Strategy workbook consists of the following worksheets:

- Navigation – contains a diagrammatic representation of the overall workflow. Clicking an item will automatically navigate to the selected worksheet or dialog.
- Input Sheet – allows technologies to be imported (see *Importing Technologies* above)
- Workshop Form – contains the latest criteria definitions in a printable form (see *Printing a Workshop Form* above).
- Scored Technology List – contains a sort-able list of imported technologies and their scores.
- Bubble_Chart_Template – contains the template charts used to generate the *Technology Charts* worksheet.
- TA_Bubble_Chart_Template – contains the template charts used to generate the *Tech Area Bubble Charts* worksheet.
- Technology Charts - contains generated technology bubble charts (see *Generating Technology Bubble Charts* above).
- Tech Area Prioritisation – contains the list of technology areas and their scores.
- Summary Tables for SBU – contains various summary tables for all technology areas including strategic objectives, potential outcomes, gaps, prospecting activities, areas to master
- Summary Gantt View – contains a Gantt chart summary showing activity start-,end- and duration-times for all technology areas.
- Overall Resource Calcs – contains a summary graph of resource usage for all technology areas.
- Tech Area v Technology Map – contains a visual mapping of technologies to technology areas.
- Data – contains underlying raw data referenced by other worksheets and forms.

- TA_template – the template sheet for each *TA(n)* worksheet.
- TA(n) – One sheet per technology area. Contains a summary of information for technology area number *n*.

Navigation

Several menu options are provided which allow easy navigation around different areas of the workbook.

To navigate to a particular worksheet select a worksheet from the *Goto Worksheet* dropdown of the *Navigation* area of the *Technology Strategy* menu tab.

To navigate to a particular technology area summary item select an item from the *Goto* dropdown of the *Technology Areas* area of the *Technology Strategy* menu tab.

To navigate to a particular *TA(n)* worksheet select a TA worksheet from the *Goto TA worksheet* dropdown of the *Navigation* area of the *Technology Strategy* menu tab.

To navigate to a particular area on the current *TA(n)* worksheet, select an item from the *Goto TA worksheet item* dropdown of the *Navigation* area of the *Technology Strategy* menu tab.