

An Overview of the GAP Assessment Tool

Concept

About ISO 14000

- Series of standards to help enterprises meet their environmental management system (EMS) needs
- The standards help an organization to implement / improve its EMS
- ISO 14001 provide Specifications with guidance for use of EMS

What is an Environmental Management System ?

- The planned and systematic approach required for dealing with environmental and sustainable development issues

Brief Description of the Tool

- It is based on ISO 14001
- The assessment provides a checklist for an review of the existing system for implementing ISO 14000, hence the name "Gap Analysis"
- The tool has been developed using MS Excel and Visual Basic for Applications (VBA)

Brief Description of the Tool (contd)

- The tool is an MS excel file and has VBA macros embedded in it.
- On opening the tool, a prompt comes up: Select the second option. i.e. "Enable Macros".



Beginning the Assessment

- The opening form asks whether you want to proceed with the analysis; quit the tool; or just view the spreadsheet
- Click "Proceed" to begin the assessment
- Click "Exit" to close the tool and exit the application
- Click "Exit Analysis" to exit the assessment for the moment and to take a look at the spreadsheet



Getting on with the Assessment

- The first assessment screen opens up on click of the "Proceed" button.
- There are 9 assessment screens which have questions that can be answered in the Yes/No format



Assessment Screens

There are 9 assessment screens in all

- Only the last assessment screen has **Evaluate** and **View Chart** buttons
- The first assessment screen does not have a **Previous** button
- All the other screens(2 – 8) have **Previous**, **Proceed** and **Save & Exit** buttons

The first and last screen are shown



Command Buttons

PROCEED

Save & Exit

EXIT

EXIT ANALYSIS

- On hitting the proceed button you will be taken to the next screen
- On hitting the "Save & Exit " button you can save your answers to the spreadsheet and quite the screens
- On hitting the "Exit" button, you can exit the tool
- On hitting the "EXIT ANALYSIS" button you can exit the tool itself

Command Buttons (contd)

Previous

Evaluate

View Chart

- On hitting the "Previous" button you can move back to the previous form
- On hitting the "Evaluate" button you can view the complete spreadsheet of GAP Assessment
- On hitting the "View Chart" button, you can view a chart that shows in detail, the extent of ISO 14000 compliance in terms of percentage

Spreadsheet Controls

User Options

The blue lit list box has the following options:

- **Analyze:** Selecting this option will open up the first of assessment screens
- **Clear:** This option, when selected, removes all previous values on the spreadsheet and chart
- **Project Name:** This option is used to enter the project details and date onto the spreadsheet



Spreadsheet Control (contd)

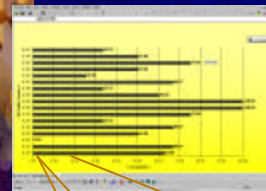
User instructions

The second blue lit list box has instructions for the user

- **Open a File:** To open an assessment file that he has saved under another name
- **Save File As:** To save a file in another directory under another name



Spreadsheet Controls (contd)



- This control is available on the bottom left corner of the spreadsheet
- As shown in the figure, clicking on **PLOT** will highlight it and cause the chart to be displayed
- If you wish to view the spreadsheet, click on **Gap Analysis**

Some Important Points

- When you are done with the assessment and want to close the file, always answer YES to the prompt which asks if you want to save the changes to the file
- Preferably, enter Yes or No in the screens, not on the spreadsheet

We hope you enjoy using the tool

Thanks

An Overview of the MSDS Manager

Salient Features

- Fully developed in Visual Basic 6.0
- Enables storage of Material Safety Data Sheets (MSDS) in an electronic format
- Documents can be printed out when needed
- Stores MSDSs on the basis of the material name and CAS number
- Files are best used in this program when they are saved in the bitmap (*.bmp) format

The Main Screen

- The main screen provides access to the other screens and also an exit to the program
- To display the MSDS already entered into the program's database, the first option is chosen
- To add more chemical MSDSs, the second option is chosen
- The third option is for exiting MSDS Manager



The Display Screen

- The MSDSs can be accessed by selecting the chemical in the list box provided at the top of the screen
- Navigation from the first page to the last as well as printing out a page can be carried out



Display Screen Controls

- The **First** button allows the user to instantly access the first sheet of an MSDS
- The **Previous** button allows the user to view the previous sheet of an MSDS sheet
- The **Next** button opens the succeeding sheet of the MSDS

First

Previous

Next

Display Screen Controls

- The **Last** button displays the last sheet of an MSDS
- The **Exit** Button allows the user to return to the first form
- Using **Print** button, you can print out the sheet that is on view



The Browse Screen

- The Browse screen is used to add more chemicals to the database
- The user needs to enter the name of the chemical and its CAS number
- The user then locates the scanned sheets and uploads them to the database



Browse Screen Controls

- The browse button opens a window for selecting the directory and file in which you have stored the scanned documents
- On selecting the relevant file/folder from the browse window, the contents of that file/folder in the window on the bottom left
- The path is displayed just above the bottom left window



Browse Screen Controls (contd)

- On clicking the double arrow button the selected image files are transferred to the window on the right
- These files can be entered into the database of MSDS Manager by clicking the **"Save"** Button
- The circled box in the Browse screen is for selecting the file type (.jpeg, .bmp, etc.).



Browse Screen Controls (contd)

- The **Clear** button clears the right window if any mistaken entries have been made
- Wrong entries of file type can be corrected by changing the file type in the list box and clicking the **Rescan** Button.
- You can go back to the main form by clicking the **Exit** button



The Emission Reduction Calculator

Objective

- Develop a user friendly software tool to:
 - Enable managers to calculate the reduction in emissions of criteria pollutants for an energy conservation project

Salient Features

- Calculates reduction in emissions for a facility
- Emissions computed are Carbon Dioxide, Sulfur Dioxide, Nitrogen oxides
- The Input data required are:
 - ✓ Name of facility
 - ✓ Energy Saved in terms of Kilowatt-Hours
 - ✓ State in which the facility is located

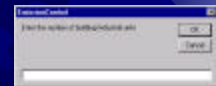
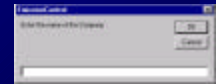
How to Begin

- The first screen is the main screen
- Clicking the Proceed button on the main screen opens up the two input boxes



Input Boxes

- The first input box asks for the name of the company for which the calculation is being performed
- The second input box asks for the number of buildings and/or facilities for which the calculations have to be made



Note: The number of

Input Screen

- The data are entered in this form
- Data is entered in the corresponding text box
- Data input is done for each building or facility
- Results of each building are displayed in the table at the bottom
- Incomplete data fields or wrong data input generates error messages



Input Screen Controls

Command Buttons

- Clicking **Previous** takes you back to the main form
- After entering all three values for a particular unit, click the **Calculate** button. The emission reduction for that unit is displayed
- Finally, once you have entered the values for all the units, the **View Results** button becomes active. Click this button to view the final summary



Results Screen

- Results screen is displayed on clicking the **View Results** button
- Entire summary of calculations is shown in a single table
- The summary or output can be generated in a text file format or a spreadsheet format



Results Screen Controls

Command Buttons

- The **Previous** button is the access to the input screen
- Click the **Exit** button to exit the software tool

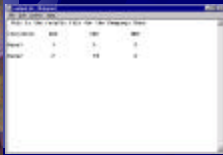


List Box

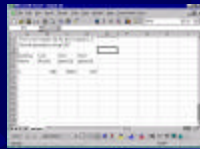
- The choices in the **list box** when selected generate the results in *text* or *spreadsheet* format



Sample Outputs



Text file



Spreadsheet

Lean Manufacturing Screening Assessment Tool

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Basic Information

- The lean tool is intended to be a screening tool for establishments that want to assess the level of lean practices being implemented in their facilities
- As lean manufacturing and lean engineering are vast topics and specific implementation varies for every factory, hence the effort has been directed toward building a screening tool so as to give an overall idea
- The software is designed in Visual Basic
- It assesses the implementation of lean practices
- The entire assessment has been divided into 4 sections to enable greater understanding of the various facets of lean industrial practices
- Green practices have also been included in the assessment to show how following environment friendly measures will help not just the organization save money and also contribute to pollution prevention

Main Form

- Clicking "Proceed" on the first screen will take you to the "Main" Screen
- The entire assessment has been divided into four sections
- Clicking the appropriate button will take you to the section



Main Form (contd.)

The Web Link button

- At the bottom of the main screen is the weblink button.
- Clicking it will access the site on "lean" maintained by the University of Toledo



Sample Screen

- The questions can be answered by clicking on the appropriate option
- Most questions are answered in the "Often/Rarely/Never" options
- Each section has three questionnaire screens followed by a "Results" screen



Command Buttons

- The "Back to Main" button takes you back to the main screen
- The "Clear" button clears all the inputted choices
- The "Next" button takes you to the next screen
- The "Back" button takes you to the previous screen

Command Buttons (contd.)



- The "Save" button saves the answers of the user
- It also performs a check to see if any questions have been unanswered
- A prompt is given to remind the user of the unanswered question
- The "Next" button is disabled till all questions have been answered

Results Screen

- The "Results" screen displays the extent of lean practices in the facility
- The results can be outputted in a ".txt" file or "excel spreadsheet"
- This required output can be selected from a combo box



Results Screen

- The Text Box provided allows the user to input a name for the output file instead of the default file name
- A Text Box is also provided to enter the name of the Company/Facility/Unit for which the assessment is being done



Command Buttons for *Results* Screen



- The **"Find"** button computes a percentage value for the lean measures
- After the value has been displayed, the button becomes invisible
- The **"Save"** button generates the output file. It also generates a message indicating the address of the output file

Save

Sample Output

A sample of the output text file

A screenshot of a text file showing output data. The text is organized into sections with headings and lists of values.

A sample of the output excel file

A screenshot of an Excel spreadsheet showing output data. The data is organized into columns and rows, with some cells containing text and others containing numerical values.