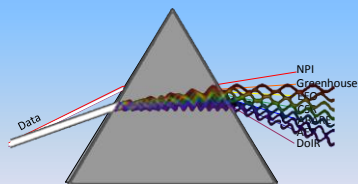




## Isolation & Misperceived Norms

- Integrate with the rest of the operation



## Isolation & Misperceived Norms

- Compare performance

Project progress

Period: 1st Half 2010

Project Type: Australian Greenhouse Office reporting

Quick Links: Add Project, Add Reporting Pack, Report Details, Reporting

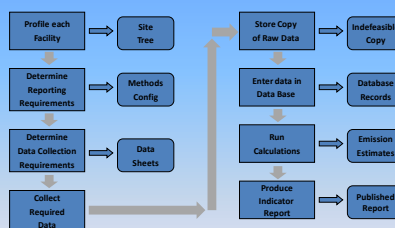
There are currently 45 projects under the current status.

| ID     | Project      | Status                                 | Leader | Date Entry | Auditor | Age | UI |
|--------|--------------|--|--------|------------|---------|-----|----|
| 201018 | OR 5/104 P10 | 61 Ready for Greenhouse Reporting      |        | 18 Aug     |         | 40  | UI |
| 201018 | OR 5/104 P10 | 62 Ready for Greenhouse Reporting Data |        | 18 Aug     |         | 40  | UI |
| 201018 | OR 5/104 P10 | 63 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 64 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 65 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 66 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 67 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 68 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 69 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 70 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 71 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 72 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 73 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 74 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 75 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 76 Data Entry Initiated                |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 77 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 78 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 79 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 80 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 81 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 82 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 83 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 84 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 85 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 86 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 87 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 88 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 89 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |
| 201017 | OR 5/104 P10 | 90 Ready for Greenhouse Audit          |        | 18 Aug     |         | 40  | UI |

## Poor Knowledge Management

- High staff turnover
- Role of consultants
- No systems to capture knowledge
- Poor data management practices

## A Generic Process



## Streamlining with Technology

- Now you're one step ahead via planning..
- Technology can assist you with streamlining via:
  - Data Collection
  - Data Management
  - Data Reporting
- Technology is not a solution in itself – it enables a solution

## Data Collection

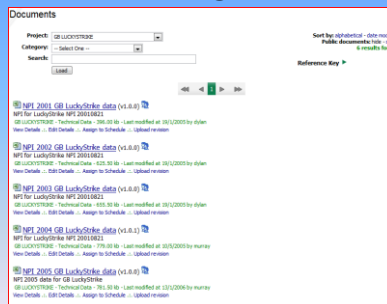
- PDAs can assist with data collection on a range of tasks
- **Hardware:** choose appropriately for the operating environment
- **Software:** consider compatibility with other systems



## Data Management

- Various levels of investment – from standalone databases (eg. Microsoft Access) through to commercial databases (eg. Oracle)
- Web enabled databases provide more flexibility and multi-site access – and there are robust open source solutions out there
- Based on this, a number of on-line services exist...

## Data Management



## Data Reporting

- Data management systems can report as well! Build reports into your systems at the start.
- Consider all types of formats – XLS, PDF, RTF...
- Consider means other than tabular reporting – like Geographical Information Systems
- Maps can be ‘plugged in’ to web enabled databases

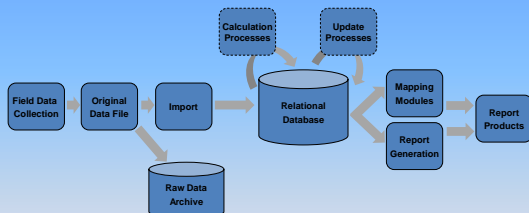
## Data Reporting

Report Key

- View a graph for this substance
- View an emission break-down report for this substance
- View an industry comparison for the selected substance
- The emission topped one or more thresholds

| Substance                         | Usage | Emissions (kg) |        |      |
|-----------------------------------|-------|----------------|--------|------|
|                                   |       | Air (Total)    | Water  | Land |
| 1 Acetaldehyde                    | 128   |                |        |      |
| 10 Arsenic and compounds          | 250   | 149            | 51.1   | 5.26 |
| 11 Arsenic and compounds          | 0.245 | 0.0655         | 52.0   | 0.00 |
| 12 Benzene                        | 62.4  | 771            |        |      |
| 14 Beryllium and compounds        | 46.5  | 28.5           | 3.47   | 5.26 |
| 16 Boron and compounds            | 0.55  | 0.261          | 15,200 | 2.05 |
| 17 1,3-Butadiene (vinyl ethylene) |       | 5.35           |        |      |
| 18 Cadmium and compounds          | 0.05  | 12.9           | 8.58   | 20.5 |
| 20 Carbon Monoxide                |       | 1,020,000      |        |      |
| 26 Chromium (III) and compounds   | 8.025 | 5,135          | 403    | 0.00 |
| 27 Chromium (VI) compounds        |       |                |        |      |
| 28 Cobalt and compounds           | 897   | 640            | 292    | 96.8 |
| 29 Copper and compounds           | 2.845 | 2,550          | 76.5   | 7.77 |
| 30 Cyanide (1-methylethylbenzene) | 2.025 |                |        |      |
| 31 CH (Organic)                   |       | 93,000         |        | 57.6 |
| 42 Ethylbenzene                   | 198   | 1.62           |        |      |
| Total power consumption           | 0.245 | 0.276          | 0.00   | 0.00 |

## A Generic System



## Conclusion

- Plan effectively to stay **one step ahead**
- Technology can help to **streamline data**

BUT

- Use technology to **enable and empower people**