Cradle-7
From concept to creation...

3SL

Cradle-DASH

The **Cradle-DASH** module provides the means to define Key Performance Indicators (KPIs) and their presentation as dashboards in web UIs, non-web UIs and reports.

Every project uses a process to create, review and publish its objectives, operational concept, sets of requirements, architecture and design models, and other systems engineering data. These processes will include management reporting, quality checks and routine audits of the volume of work that has been completed, and the completeness and quality of this work.

Key Performance Indicators (KPIs) are measures of the maturity of the information managed in the process, and therefore of the process itself.

Cradle supports KPIs as a convenient means to provide an overview of the status of an entire project, or any phase within it.

Any number of KPIs can be defined. Each KPI is a calculation based on one or more elements of one or more metrics:

- Product
- Sum
- Difference
- Deduction
- Proportion
- Percentage

combined to produce a single numerical value. The component values are derived from user-defined queries, that are searches of database items, or searches of the links between these items, or both. The component metrics can:

- Count the values or calculate the total, mean, average, range or variance of the values from the items found by the queries
- Use values held in attributes or the results from user-defined calculation attributes
- These calculation attributes can use other attributes of the same item (this includes other calculations) and also attributes from linked items, such as calculating the total cost from the individual costs of a parent and its children

Any number of colour-coded range bands can be defined for each KPI so that its value can be shown in a block with an appropriate background colour.

Using colours for the KPIs allows the overall project status to be seen at a glance. Typically, anything shown in green is good, anything shown in red will need urgent attention, and anything yellow needs to be monitored carefully. It is easy to apply such 'traffic light' conventions in a KPI's colour bands.
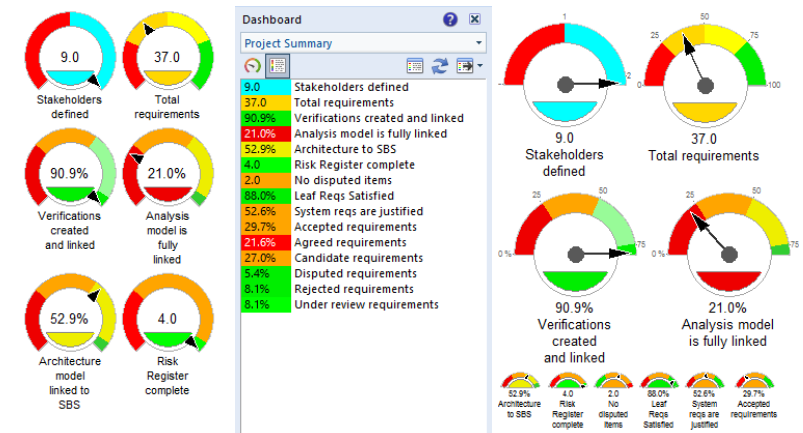
A collection of KPIs is held in a dashboard. Any number of dashboards can be defined, either personal to you, or shared with other members of your team, or shared with everyone in the project, or available to all projects.

Each dashboard presents its KPIs as a column with the KPI shown either as a name and colour-coded number, or as a dial. The size and display styles of the dials can be controlled for each KPI.

DASH
Dashboards

The dashboard can be published as a report, either as a table or as a set of dials. As for all reports, output can be to a file, a printer or the UI. Such dashboard reports are fully supported in web UIs, and non-web UIs.

The value shown in each KPI is a link. Selecting the value will display the list of items that have been used to create the KPI's value.
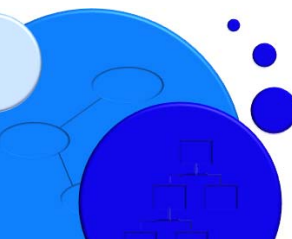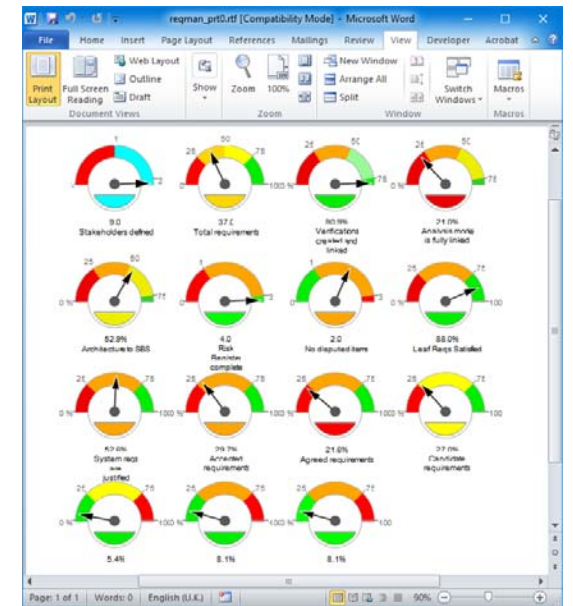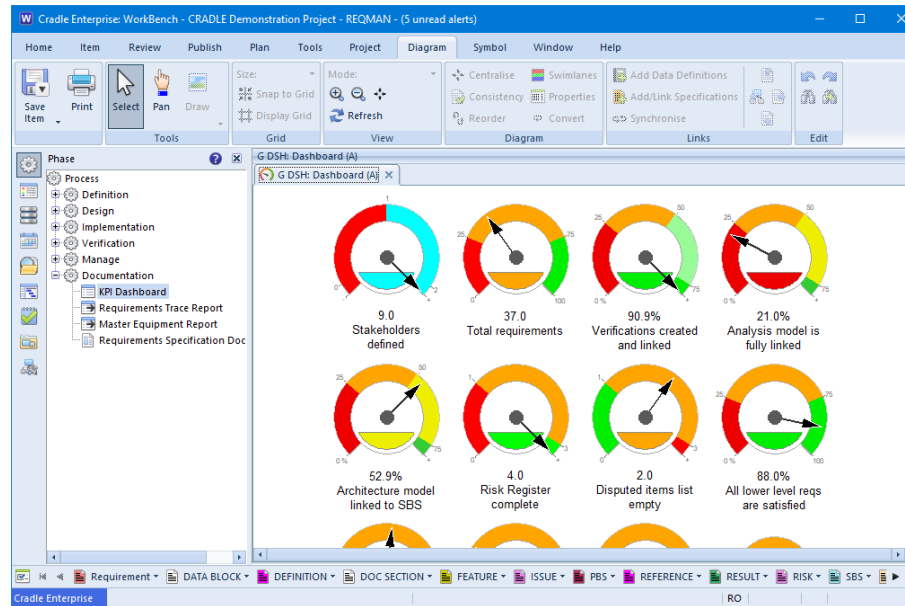
Dashboards are shown in a separate sidebar in both web UIs and non-web UIs. One dashboard can be set as the default, and will be shown automatically when the UI starts.

Custom web UIs could be created to show a collection of dashboards, for example to provide a simple overview of the project and more detailed analyses of the status of each work area.

Dashboards can be published to RTF, HTML and CSV files.

Feature Summary

Feature	Benefits
User-defined KPIs	Calculate values from user-defined metrics to monitor project status and progress
Flexible calculations	KPIs are calculated from the values of one or more metric elements, each of which can be a calculation that uses the values of attributes inside items, or the results of user-defined calculation attributes (which can themselves reference other calculations)
Colour-coded values	Highlight the meaning of KPI values with user-defined colour-coding bands
User-defined dashboards	Create groups of KPI values
Dashboard displays	Dashboards can be shown as dials and tables in separate UI sidebars in web-based and non-web UIs
Expand KPI values into items	Expand any KPI value into the database items that create the value to examine progress or analyse problems highlighted by the KPI
Publish as tables or graphics	Easily generate output in common formats (HTML, RTF, PostScript, SVG, CSV…) for common tools
Batch mode	Once defined, dashboards can be published as reports from the command line, optionally in batch jobs