

Title	DfES Easy Monte Carlo Tool for Resource Planning
Key Objectives of the Model	DfES developed this tool to support Every Child Matters and Joint Commissioning for children, young people and maternity services. It uses a statistical technique (Monte Carlo analysis) to simulate the results of a large number of complex needs and the financial impact on resources and budgeting. The tool simulates different scenarios.
Description	<p>Monte Carlo simulation is a proven statistical technique for modelling complex systems with a range of probabilities of outcomes. The technique is incorporated into an Excel spreadsheet with built in macros to make it easier to input range assumptions around the costs (money or time) and the corresponding likelihood of the event happening.</p> <p>The results are displayed graphically and there is a useful guidance section in the 'Help' worksheet.</p>
Application areas	<p>While originally designed for child services, the tool could be used for adult social services by inputting the appropriate assumptions.</p> <p>The 'Help' worksheet provides more details in terms of how the tool operates and includes examples of five different application scenarios:</p> <ol style="list-style-type: none"> 1. Modelling the costs of different projects over time e.g. a commissioning project, evaluating a pilot, training, printing publications, developing toolkits 2. Modelling the costs of looking after children with complex needs in a local area 3. Modelling the critical path for a capital programme 4. Modelling the duration of a typical care pathway for autistic spectrum disorder 5. Modelling the organisation's risk register
Input	<p>For any event, estimate the most likely cost (financial or time). Then enter the value in a best-case scenario and a worst-case scenario. Lastly, enter the likelihood that the event will occur. Repeat for the next event.</p> <p>See the 'Help' worksheet in the Excel spreadsheet for examples.</p>
Output	<p>A graphical display showing the range of outcomes and corresponding probabilities. Where the input is financial cost, then the graph can be used to see the average cost and the potential under or over spend and probabilities of such happening. The input assumptions can be modified e.g. in a month's time when actual costs are known, and the graphs updated to help set aside contingencies, if required.</p> <p>Where the input is not money, but months in a care pathway, the graph will show the likely overall duration of a person in care.</p>
Resources External – initial set-up, ongoing support	<p>None – spreadsheet is provided free and clear.</p> <p>Some statistical knowledge is desirable but this is likely to exist already within council finance and analytical teams.</p>

Internal – initial set-up, ongoing support	Minimal – some internal understanding of the existing costs and likely costs is required.
Indicative Costs and timing	None – the tool can be used immediately once internal understanding is robust
Additional considerations	This tool has been promoted to children services in CSSRs but has wide applicability in adult social services for better estimate and planning of financial implications and care pathway durations.
Supplier contacts	<p>Alan Krikorian Economic Adviser Commissioning and Market Development Department for Education & Skills Email: alan.krikorian@dfes.gsi.gov.uk Telephone: 020 7925 5905 Web: http://www.everychildmatters.gov.uk/strategy/planningandcommissioning</p>
Council reference contacts	
Documentation	<p>Short briefing note on the Monte Carlo Analysis tool with the email introducing the tool to commissioners of children services</p> <p>Monte Carlo Analysis tool (a large spreadsheet) http://www.everychildmatters.gov.uk/resources-and-practice/IG00215/</p> <p>There is other useful information and guidance on: www.everychildmatters.gov.uk/strategy/planningandcommissioning/guidance/</p>

Disclaimer:

CSED provides this information as an indicative overview of the methodology. Councils will need to evaluate proposals from suppliers in the light of their local situation before making decisions on specific applications.