

# Manufacturing simulation software, literature review

[Literature](#)



Q1: Identify factors that you would consider towards selecting an appropriate simulation software for use within a manufacturing organisation Factor| Reason(s) for Selection| Reference(s)| Analysis| Because analysis is the most tool for audit and analysis of the overall strategic position of the business and its environment. If the simulation software can provide statistics such as means, variances, and confidence intervals and goodness-of-fit test they are will be very helpful feature. Source: International Journal of Advanced Manufacturing Technology, May2010, Vol. 47 Issue 1-4, p381-393, 13p, 2 Diagrams, 10 Charts, 1 GraphChart; found on p384| Testing and efficiency| Validation and Verification: Are independent procedures that are used together for checking that a system meets requirements and specifications and that it fulfils its intended purpose.

If the software package provides elements such as on-line help, on-line error message, on-line tutorials, logical error checks, and error handling of a package are also helpful features| Source: International Journal of Advanced Manufacturing Technology, May2010, Vol. 47 Issue 1-4, p381-393, 13p, 2 Diagrams, 10 Charts, 1 GraphChart; found on p384| Animation| Because the animation can combine vast amounts of scientific data into a compact package, which can then be presented simplistically.

Sub Factor and explanations: Icons: If the package has library of standard icons, icon editors, possibility of creating new icons or importing them from other software packages, and media control interfaceRunning: If the animation could run with the model concurrently the speed of model run would be lower than when the animation is run after the model run has been finishedScreen layout: Issues related to the graphical presentation of the <https://assignbuster.com/manufacturing-simulation-software-literature-review/>

model appearance on the screen| Source: International Journal of Advanced Manufacturing Technology, May2010, Vol. 7 Issue 1-4, p381-393, 13p, 2 Diagrams, 10 Charts, 1 GraphChart; found on p384| Customization | It's easy for developers to extend. Provides many solutions for needs. | Microsoft Corporation| Reports| . User-defined reports are an advantage if the simulation software output standard reports such as queue lengths, waiting times, and utilization. | Source: International Journal of Advanced Manufacturing Technology, May2010, Vol. 47 Issue 1-4, p381-393, 13p, 2 Diagrams, 10 Charts, 1 GraphChart; found on p384|

Hardware| To test the software if can be run on different hardware such as PCs, workstations, mainframe, or high-performance computer, and its very important before make the decision of buying the software. | Source: International Journal of Advanced Manufacturing Technology, May2010, Vol. 47 Issue 1-4, p381-393, 13p, 2 Diagrams, 10 Charts, 1 GraphChart; found on p384| Q2: Using the identified factors , evaluate any two simulation software towards use within a manufacturing organisation.

Factor| ProModel Optimization Suite: Score| Reasoning Behind Score| Autodesk Simulation: Score| Reasoning Behind Score| Analysis| 10/10| Brainstorm using the model to identify potential changes and develop scenarios to test improvements which will achieve business objectives. Run scenarios independently of each other and compare their results in the Output Viewer developed through the latest Microsoft WPF technology. | 10/10| Autodesk Simulation software includes features for static stress and Linear dynamic analysis.

Study stress, strain, displacement, shear, and axial forces resulting from structural loading. | Testing and efficiency | 10/10 | The ProModel suite Immediately tests the impact of changes on current and future operations, risk free, with predictive scenario comparisons. Determine optimal business performance with a high probability of meeting your business goals. | 10/10 | Autodesk Create quality products, meet safety requirements, and avoid costly mistakes by validating critical design decisions, material choices, and product behaviour before manufacturing begins. Animation | 9/10 | The ProModel suite Create a dynamic, animated computer model of business environment from CAD files, process or value stream maps, or Process Simulator models. Clearly see and understand current processes and policies in action. | 10/10 | Advanced simulation setup is made easier through the use of standard engineering terminology, visual process guidance, and user-friendly tools and wizards that automate the transfer of simulation results among multiple analyses—helping designers and engineers focus on product performance, not advanced numerical or simulation methods exchange and full associatively with Autodesk. Customization | 10/10 | \* Customized user interface with table inputs \* Custom-designed parameter screens \* Automatic model creation from external data sources (e. g. Excel spreadsheets, databases, or ASCII text files) \* Software execution from another application \* Model building via programming | 9/10 | Autodesk Simulation software provides a range of tools and wizards for model visualization, results evaluation, and presentation. Features include multiple-window displays, fast dynamic viewing controls, and customization option. Reports | 7/10 | Automatically create output reports developed in the latest

Microsoft WPF Technology| 9/10| Easily document and share simulation results, presenting them through automatically generated reports in HTML, PDF, DOC, and RTF formats. Add images, animations, and text-based results. Fully customize appearance and formatting. | Hardware| 9/10| Because ProModel 2. 3 GHz, 1 GB RAM, So it will suitable for the users. | 6/10| Because Autodesk recommends a supported 64-bit operating system, a supported 64-bit processor, and 12 GB RAM or higher, so It will be kind of problem to the users. |