

Process Simulation: A recipe for fact-based decision-making

Improve your service levels

Save your budget

Become a blueprint 2010 hero

Highlights

Process modeling and simulation is applied by leading firms worldwide to test and fine-tune changes to business operations without placing risk and strain on your business. By modeling changes in business processes using simulation software, organizations can make better decisions and improve outcomes when managing:

- (1) Service Level Adherence
- (2) Organization Development and Redesign
- (3) Risk Management
- (4) Strategic Initiatives
- (5) Change Management

When processes work well, they can significantly impact operational costs, efficiencies, productivity, and customer satisfaction.

Some of the world's largest organizations are applying process simulation techniques to:

- Justify a business case and validate the investments necessary to make changes
- Validate business changes from your team, including lean and six-sigma based recommendations
- Anticipate outcomes and fine tune business operations
- Easily change the process simulation parameters to test different process environments and parameters
- View animated models of complex business operational systems
- Save time, save money, and improve internal and externally-facing services



Introduction

Process improvement is an important step in you and your team meeting specific goals, providing value-add service and products to your clients. When processes work well, they help improve your team and organization's efficiency, productivity, and customer satisfaction. They also help you achieve a competitive advantage.

Understanding the risk—defensible business decisions

When your team first looks at the inefficiencies in your organization, every possibility for change may look like a great idea. Sometimes the array of potential changes appear overwhelming.

Your organization may even have invested in Lean or Six Sigma methodology to help identify waste reduction and inefficiencies in your organization.

But can you be sure that these potential changes are a good idea? Do you know which ones will have the biggest impact? Which improvement opportunities pose the most risk to your mission-critical business function?

Ill-conceived process changes cost time and money as they involve retraining people, redeveloping tools, templates and reports.

Without making decisions in a controlled manner, what seemed like a good idea at first can lead to an even worse situation and potentially the loss of significant time, effort, and even the trust of your clients and business partners.

Mitigate risk. Quantify benefits.

Why wait a year or more to prove you've made the right decisions? Not only can process simulation

reduce your risks but it can quantify the benefits.

Taking the time to model changes offer organizations a way to take the risk out of implementing changes.

Using software to model business process changes before actually implement them offer organizations the ability to predict outcomes. Simulations can be used to test process designs, measure performance, identify potential bottlenecks, identify headcount problems, and plan ahead. In summary, process simulations can help identify the best solution and help identify problems before they are realized.

Project scope — approaching opportunities strategically

Many process re-engineering implementation efforts never get implemented because the risk of implementing change is too high. Organizations end up stuck in their old way of doing things while not achieving their set objectives.

Business Process Simulation as a part of business case definition and approval is an intelligent way to quantitatively define benefits and to get the new process right without relying on trial and error in the real world.

Application to your work environment

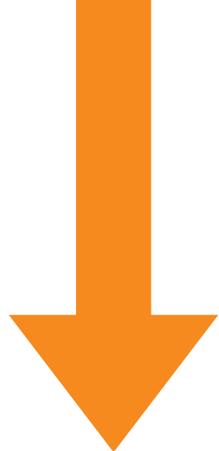
SIMUL8 Business Process Modelling and Simulation software is used by leading global companies in:

- Government and Public Services
- Healthcare
- Transportation and Logistics



- Supply Chain and Manufacturing
- Retail
- and many others

SIMUL8 has helped leading companies manage change and remain competitive by identifying the process changes that will help them meet their objectives.



Who is taking advantage of process simulation?



“More than 70% of all major transformation efforts fail. Why? Because organizations do not take a consistent, holistic approach to changing themselves.”

- Dr. John Kotter, Change Guru, Kotter International

Important considerations

1. **Know your objectives** — Clearly identifying your mission and objectives so that you know what success looks like and what you’re driving towards.
2. **Understand your Current State** — You can’t move forward if you do not understand your current operating conditions and the root causes driving the challenges that you face.
3. **Determine where you want to be** — Time commitments, budget, quality specifications, and legislation may have strong influence over your process design and implementation decisions. Set realistic goals to move your organization forward.
4. **Involve process subject matter experts in defining your scenarios** — Brainstorm ideas with people from various departments and teams. Develop scenarios and options for your process model and simulation. Modelling software allows you to test conditions rapidly and understand how each changes the outcomes.
5. **Leverage your simulation outputs to justify change initiatives** — Once you’ve modelled your changes, use the outputs of the model to justify change decisions in a business case format
6. **Mitigating Risks**—The model that you have developed is a powerful tool that not only guided your decisions, but also helps you plan for the implementation by understanding the risks ahead. Your full change plan can now take advantage of your understanding by developing mitigation strategies to deal with pending risk.

SIMUL8 Software

Bronson leverages SIMUL8 Software to create Business Process simulations of scale and complexity.

SIMUL8 is a mature commercial-off-the-shelf (COTS) offering that offers the power and flexibility required by our clients and by market leaders such as Canon, Philips, Toyota, Nike, Visa, and UPS to name a few.

As an approved reseller, Bronson consultants can take advantage of the advanced analytics offered by SIMUL8 software for optimization, parallel processing, and sensitivity analyses, to make recommendations to our clients based on hard data rather than best guesses.

We have successfully completed many process simulations for many of our Canadian federal clients which has led to improved bottom-line results.



Analytical insight into your business

Data inputs

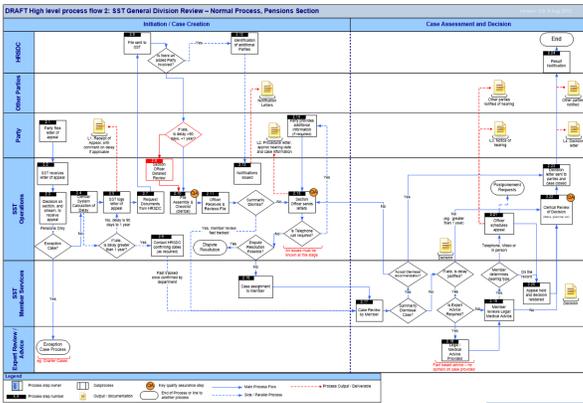


SIMUL8 process models are dependent on data for configuration and to benchmark the simulation model.

All of our clients seem to have data stored in spreadsheets, online databases, in desktops, and spread across multiple units of their organization.

Complex processes are often dependent on multiple data sources and we can help you sort through the clutter and help you focus on making real improvements to your organization

Modeling and simulation



BRONSON Developed Model

SIMUL8 offers advanced modeling capabilities with graphical user input abilities. Simulations can model exceptionally advanced business processes and offer capabilities such as parallel processing, simple re-configuration, and use-case scenarios.

Process steps leverage data for simulations. Simulations are run using the supplied data and provide the end-user animated models.

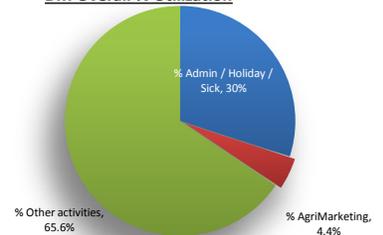
Simulations can be provided to our clients using tools from SIMUL8 and we can make changes per your requirements.

Bottleneck Identification and bottom line improvements

SIMUL8 outputs allow our team to put together recommendations based on results, not on intuition or best guess. The world's leading organizations don't have time or capacity to change themselves using a trial-and-error approach. That's why process modeling and simulation are game changers for many of our clients.

Case	Scenario	Simulation Period	Simulation Start	Simulation End	Simulation Duration	Simulation Status	Simulation Results	Simulation Metrics
16	1	201000	14/08/2010	201000	201000	Success	875	100%
20	1	201000	14/08/2010	201000	201000	Success	884	100%
26	1	201000	14/08/2010	201000	201000	Success	822	100%
27	1	201000	14/08/2010	201000	201000	Success	809	100%
28	1	201000	14/08/2010	201000	201000	Success	818	100%
29	1	201000	14/08/2010	201000	201000	Success	806	100%
30	1	201000	14/08/2010	201000	201000	Success	802	100%
31	1	201000	14/08/2010	201000	201000	Success	807	100%
32	1	201000	14/08/2010	201000	201000	Success	804	100%
33	1	201000	14/08/2010	201000	201000	Success	806	100%
34	1	201000	14/08/2010	201000	201000	Success	803	100%
35	1	201000	14/08/2010	201000	201000	Success	805	100%
36	1	201000	14/08/2010	201000	201000	Success	804	100%
37	1	201000	14/08/2010	201000	201000	Success	806	100%
38	1	201000	14/08/2010	201000	201000	Success	803	100%
39	1	201000	14/08/2010	201000	201000	Success	805	100%
40	1	201000	14/08/2010	201000	201000	Success	804	100%
41	1	201000	14/08/2010	201000	201000	Success	806	100%
42	1	201000	14/08/2010	201000	201000	Success	803	100%
43	1	201000	14/08/2010	201000	201000	Success	805	100%
44	1	201000	14/08/2010	201000	201000	Success	804	100%
45	1	201000	14/08/2010	201000	201000	Success	806	100%
46	1	201000	14/08/2010	201000	201000	Success	803	100%
47	1	201000	14/08/2010	201000	201000	Success	805	100%
48	1	201000	14/08/2010	201000	201000	Success	804	100%
49	1	201000	14/08/2010	201000	201000	Success	806	100%
50	1	201000	14/08/2010	201000	201000	Success	803	100%

DM Overall % Utilization



Bronson Consulting — where we fit

Bronson has expertise in applying advanced software simulation techniques for several clients. We are able to help gather critical data points for simulation input, model your simulation, run trials, and prepare recommendations based on your requirements. We are an approved value-added reseller of SIMUL8.

We have provided business process improvement project services in the public and private sector for clients such as:

- the Ottawa Police,
- the City of Ottawa: Water Distribution and Wastewater,
- Department of Employment and Social Development Canada (ESDC)
- the Truth and Reconciliation Commission of Canada,
- Agriculture and Agri-Food Canada,
- Virgin Media, and
- MReal Paper Manufacturing.



Bronson offers a wide spectrum of management consulting services including strategy, policy, planning, delivery, evaluation and change. Our experienced team of consultants includes business strategists, accountants, engineers, software developers, research scientists, public administrators, communications planners, writers and industry subject matter specialists.

Case Study: Identification of Cost and Time Savings Using Business Process Simulation at Agriculture and Agri-Food Canada



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Since the launch of the AgriInnovation program in January 2013, the high program demand and limited resource availability has led to delays and backlog in system. The program proposals are complex and require a comprehensive review process to assess program fit, viability, and technical risk. A review was undertaken to ensure that work be distributed fairly and processes be optimized in order to provide the best possible client service.

Upon the identification of potential improvement opportunities using LEAN methodologies, business process modelling and simulation experts from Bronson helped determine resourcing assignments and cost savings under different scenarios, with an eye to attaining a high level of compliance with the service level standard targets.

Using this approach, the complexity and high cost of making changes were estimated using the business process simulation model prior to actual implementation. The exact nature of the trade-offs between service excellence and cost-effective delivery of service allowed our client to modify their process flow and select the right level of resources.



Resourcing



Process Decisions



Scheduling



SLA Compliance