A Blueprint for Boosting Business Performance with

"CONATIVE" SOFTWARE DESIGN

New IT systems development methodology quickly and easily makes your employees more productive and your business more efficient and profitable!

By Ron Jasper, CEO, Conative Information Technology

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Executive Summary

When your employees log into your IT systems, do they immediately see a menu button they can click on to get the software to do exactly what they want it to do?

If not, it means your IT systems don't fit your business operations as well as they could. As a result, your workers often can't get the information they need to do their jobs properly.

The solution is an IT methodology called **conative software engineering (CSE).** This is a software development methodology for creating more intuitive IT systems.

CSE produces systems that more closely align with both business processes as well as the way in which employees do their jobs. The result is:

- Greater productivity.
- A shorter learning curve.
- Lower training costs.
- Maximum ROI.
- Overall improvement in business performance.

A Look at the Problem

There are a number of common problems plaguing existing IT systems today:

- ✓ Systems do not accommodate existing business processes.
- ✓ Systems do not provide enough of the correct information users need.
- ✓ Business has outgrown the system.
- ✓ Difficulty integrating new systems with business processes.
- ✓ Existing systems cannot handle the load.
- ✓ Systems are becoming technically unstable (e.g., database is corrupting, users are disconnecting, system is slow, etc.).

The cause of so many of these system deficiencies is an underlying disconnect pervasive throughout IT.

And that disconnect is this: no off-the-shelf software comes perfectly tailored to your business operations right out of the box.

Achieving a tighter fit between IT systems and business processes makes your employees more productive, improves customer service, gives you better control over cash flow, and makes your business more efficient and productive.

And now that more perfect fit between IT and the business can be quickly and easily attained using **"conative" software design.**

Through a combination of custom configurations and coding, conative design rapidly and affordably eliminates the system problems listed above – enabling IT systems to better service the business and its employees, customers, vendors, and others in your supply chain.

Using Conative Software Engineering to Improve IT Systems Performance

Conative software engineering (CSE) begins with rigorous requirements based on an unprecedented "deep dive" by software engineers into the business operations, needs, work, processes, and goals.

The deliverable is a ***system blueprint*** – a document that defines requirements for the new system to a degree of accuracy and detail unmatched by any other software development methodology.

Based on the system blueprint, you can configure and customize the software to more closely align with how employees do their jobs.

The end result is IT systems that are intuitive, easy to use, and have short learning curves.

What's more, these conative IT systems are optimized to give users the information they need, in the easiest to use and most understandable format, where and when they need it.

The benefit to the organization is optimal alignment between business processes and IT systems, which in turn maximizes business productivity and profits.

What is "Conative" Design?

The human mind has three parts: cognitive, affective, and conative:

- The cognitive part of the brain has to do with intelligence.
- The affective deals with emotions.
- The conative drives how one acts on those thoughts and feelings.

There are two keys to conative as applied to software design:

First, the conative methodology. It is a method of gaining a deeper understanding of how a business and people interact with an IT

system, and then building them their ideal system.

Second, conative design, which means the systems produced using this methodology work the way people think and feel about their processes, tasks, and applications.

What are the key advantages of using conative software design methodology? It is that the IT systems it produces:

- Work the way your people naturally want to work.
- Offer functionality optimally aligned with business processes.
- Are intuitive, easy to learn, and simple to use.
- Give employees accurate information, when and where they need it, and exactly in the form they need it.
- Improve results from business processes.
- Boost business performance and the bottom line.

Designing High-Performance IT Systems with the Conative Methodology

Here are the major steps in the conative software design process:

Step one: Interview company owner and senior management team to identify top client objectives by asking 2 important questions:

...What does "better" look like 6 months after implementation?
...What improvements would have been realized by that time?

Step two: Interview employees to identify:

...The work they do.
...Which other employees they interact with.
...Things they like and dislike about existing software.
...Critical requirements of the new software.
...Desired capabilities for new software.

Step three: Determine the system environment including:

...Technical infrastructure.
...Existing specialized software.
...Unique business processes.

Step four: Decide which employees are going to help implement and evaluate the system and what methods they will use to perform this evaluation. This is a critical step to realize optimal "buy-in" of the new system.

Step five: Determine training requirements and schedule for minimal disruption.

Step six: Create a conative "system blueprint" (see next section) based on steps one through five above.

Step seven: Show the system blueprint to key users and senior management, walk them through it, refine as needed, and then finalize the blueprint before software configuration and coding begin.

Conative Blueprints: The Deep Dive into System Requirements

According to an article in CIO, 55% of IT projects fail.[1] Why is this so?

One major cause is: poor definition of system requirements.

One of the biggest complaints senior management and users have with IT is: "The system took too long to deliver, went over budget, and is not what we asked for."

One of the biggest complaints IT has with management and users: "They don't know what they want, can't articulate their requirements, and then when we deliver what they asked for, they complain the system doesn't do what they needed."

Software developers have long talked about "GIGO." It stands for "garbage in, garbage out."

And it means the output of a system development project is only as good (or bad) as the input given the development team.

IBM believed GIGO was so important that in the 1980s, the company pioneered an IT class in "defining system requirements" for users and IT professionals

Well, the conative process takes GIGO and IBM's defining system requirements to the next level – with a document we call the "system blueprint," a sample of which is shown in Fig. 1.

The beauty of the conative system blueprint is that it fits on a single page, so everyone can see the system environment and requirements at a glance – including:

- The existing IT technical infrastructure.
- Current specialized software installed.
- Unique business processes.
- Improvements to existing system capabilities desired by users and senior management.
- New system capabilities required by users and senior management.

The conative methodology improves the "output" – the quality of the system produced by an IT project – in two important ways.

First, according to GIGO, the quality of output depends on the accuracy of the input. And the system blueprint provides developers with more accurate and in-depth input on requirements definition than any other methodology.

Second, conative developers, by going through the extensive interviewing process needed to develop the blueprint, are sensitized to the needs of the business and its users to an extraordinary degree.

This greater understanding of the users and their work enables developers to produce systems that are easy, intuitive, and comfortable to use. Users get accurate information from the system faster and in the desired format. The bottom line: increased performance and better outcomes.

[1] http://www.cio.com/article/3068502/project-management/more-than-half-of-it-projects-still-failing.html

Fig. 1. Conative system blueprint.

Conative Building Blocks

The methodology of system blueprint implementation depends on whether the owner or CEO wants brand new IT systems or to just fix a problem in existing applications.

For a *new* IT system, a major best-in-class software platform or package is the foundation upon which the system is built. This standardized "off the shelf" software platform is then tailored to align with the system blueprint using custom configuration, new code, or a combination of the two.

Example: Conative development was used to create custom software for a 6-location locksmith wholesale, retail, and service company. The system enables easy common part-numbering, product costing, and product pricing.

In addition, the software allows centralized automated generation and broadcasting of PDF documents for customer statements, invoices, sales orders, and vendor purchase orders.

The result has been a significant reduction in inventory costs, higher profit margins, and the ability to transfer product between branches without the associated clerical labour.

Plus, the system produces timelier month-end financial statement generation, which allows branch managers to react to issues while they are still current.

By comparison, an ***upgrade*** to fix a single problem or flaw in an ***existin***g IT system is often just a more minor platform reconfiguration or more limited custom coding project.

For instance, using conative methodology, a custom add-on was written for the accounting system of a large Vancouver restaurant supply company. The new code handles their unique sales order-entry process, resulting in significant growth in sales without hiring extra order-entry people.

Conative Design for ERP

Conative methodology improves enterprise resource planning (ERP) system performance by:

- Seamlessly inserting the new system into an existing system.
- Accomplishing the client's stated business goals.
- Finding hidden value in their collected data.
- Providing information better and faster to reduce or eliminate user frustration.

Alere is our preferred platform for conative design of ERP systems, because it eliminates need for custom coding in 80% of new ERP projects.

How does Alere reduce custom coding in building new systems? The Alere platform is based on decades of working with manufacturers and distributors, and this extensive experience is reflected in how the software works.

There is built-in flexibility in the way Alere can be configured to run "as is." This enables faster and easier customization of the software. Plus, Alere preserves these customizations through version migration.

How it works: Alere features internal "hooks" which are coded right into the product. Using the modification framework, a data table is set up with the internal hook name as one field and the custom software call in the other field. Because these internal hook names always exist (and there are dozens of these locations), the calls to any custom software are preserved forever, whether version 10 or version 100.

Conative Design for Wholesale Distribution Companies

Conative design is used to create IT systems for wholesale/distribution companies that:

- Deliver historical and projections reporting for both the sales and purchasing process.
- Assign the correct general ledger number when different items are sold to varying customers.
- Improve financial statements to boost bottom-line performance.

Take the Next Step

Want to find out how conative software design can improve the usability, reliability, and performance of your IT systems while enhancing customer service and boosting employee productivity?

Then we invite you and your CIO or IT Director to call us at **(604) 290-9595** today for a free, no-obligation initial consultation. Talk about your business and IT needs with one of our technical people who are trained in helping companies like yours improve business and IT systems performance using conative system blueprints, software configuration, and custom coding.

About the Author

Ron Jasper is CEO of Conative Technology, a Vancouver-Based IT consulting firm. Mr. Jasper has more than 3 decades of experience helping companies tailor their IT systems to more closely align with business practices to improve outcomes.

Conative has helped companies in industries ranging from manufacturing and distribution, to construction, banking, and telecommunications, and many more. Key areas of focus include financial reporting, sales and marketing, and operations.

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