

Red Erb Custom Software Development Overview



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An informative guide by red erb pty ltd

*"It is through constant change,
that we can achieve perfection."*

Custom Software Development Overview

About this Guide

This guide is intended to inform and educate readers about the Red Erb Custom Software Development solution.

This development technique is a superior method for delivering custom software solutions.

The advantages and disadvantages of this approach will be discussed in this guide.

The Red Erb Custom Software Development Solution provides an alternate software solution to traditional methods, as discussed in the "Business Software Solutions Guide" available at <http://www.rederb.com/documentation.html>

It is important to note that this guide only focuses on the software component of business solutions. Although software plays an integral role, there are many other vital factors required for a successful implementation.

If you have any comments or feedback on this guide, then please feel free to contact us via our web site.

We hope you find this guide useful, and that it helps you realise the benefits of a custom developed software solution.

What is it?

The Red Erb Custom Software Development solution provides a unique alternative to traditional business software solution (as discussed in the "Business Software Solutions Guide" on our web site).

It evolved after many years of consulting and software development experience working on projects throughout the world. During this time, several problems and inefficiencies were identified in projects that used traditional software development methods.

Utilising our technical expertise and experience, we began to design a process that would resolve these problems and other pitfalls associated with software solutions.

The result is an innovative technique for developing software that automates the development and testing of a solution.

This enables software to be developed and delivered faster than ever before, whilst ensuring maximum flexibility for business changes and requirements.

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How does it work?

To understand how the process works, readers must first be informed about the methodology of software development.

Software development generally involves five stages.

1. Analysis and requirements gathering
2. Solution design
3. Coding
4. Testing
5. Delivery

These stages are equally important to the success of a software solution and all require different skills and resources.

The analysis stage determines all of the business requirements of a potential solution, prioritising them in order of necessity. These requirements must be detailed enough to explicitly outline what a solution will provide.

The next stage involves designing a potential solution that will meet the previously identified requirements.

Subsequently, this design will be used to begin coding and then test the solution to ensure that it meets the requirements as it was designed to.

Each stage is therefore directly impacted by the quality of the previous stage. For example, if the design is incorrect, then the coding will be incorrect. If the coding is incorrect, then the testing will fail.

Hence it is logical that the analysis and requirements gathering stage has the most significant impact on the subsequent stages. This is why it is critical to successfully identify and agree on the requirements.

Any changes to the requirements, after the initial requirements have been identified, creates a ripple effect, impacting each of the subsequent stages.

The Red Erb Custom Software Development still involves the five stages of the development lifecycle. However, it uses the design phase to document and define the solution behaviour in what is called an *application definition*.

This application definition is then used to automatically generate the software code as desired, and also to test the code that was generated.

As the solution design is altered, so is the application definition, therefore automatically altering the software that is developed.

It is through this unique process of creating an application definition and translating that definition into the appropriate software solution, that makes the Red Erb Custom Software Development approach so beneficial.

The advantages and disadvantages of this approach will be discussed in the next section.

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Advantages of the Red Erb Solution

There are many advantages involved with this approach.

Firstly, it reduces the time and resources required during the development and testing of a solution. This results in a significantly cheaper solution when compared with traditional software development.

Secondly, it provides increased flexibility that allows a solution design to be altered, or technically changed as desired. This enables businesses to rapidly alter business processes to respond to market conditions or strategy changes.

As the development and testing of the software is automated, it also removes any chance of human error during these stages.

Additionally, all documentation and help can be automatically created thereby ensuring it remains up to date with the current solution design.

Perhaps one of the main advantages, due to the flexible nature of the development approach, is the ability to phase a solution. Phasing a solution involves breaking down priorities and business functionality into logical components. These are then grouped together and designed to be delivered at different intervals.

This allows customers to control their costs, ensure their requirements are correct and to maximise the effectiveness of a solution. It also allows customers to start off small, and then improve a solution as they realise its full potential.

As a phased solution is completed, some inefficiencies with the design may be identified, allowing subsequent phases to be altered accordingly.

Similarly, another major advantage is incorporating future requirements and changes.

A business will continue to grow and evolve, resulting in constantly changing requirements that were not considered in the original solution. These changes can be implemented quickly and effectively into your existing solution through the automation of the development and testing.

Furthermore, by allowing software solutions to utilise various programming languages, operating systems and databases, businesses are able to achieve a level of technical independence that would otherwise not have been possible.

This allows businesses to easily adopt new technologies or more cost effective infrastructures that would otherwise require a further financial investment to migrate the solution manually.

For example, if a business deems it beneficial then the same solution that was designed for a specific database, language and operating system, can be easily migrated to another database, language or operating system.

If you would like to see how the Red Erb Custom Software Development can help your business, or if you would like more information, then please visit us at our web site <http://www.rederb.com> or send us an email at enquiries@rederb.com

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Disadvantages of the Red Erb Solution

Every solution has a disadvantage.

The disadvantages identified with the Red Erb Custom Software Development are as follows.

Firstly, it still requires the analysis and design stages of the software development approach. These stages are critical and can not be automated at this stage.

Secondly, not all solutions can be defined and generated using this technique. Some transactions will be too complicated and will still need to be programmed and tested using the traditional development approach.

Finally, the Red Erb Custom Software Development approach will never be completed. Some may view this as a disadvantage, but we view it as an advantage.

The reason for this is that it will continually evolve. It will evolve to incorporate new design considerations, enable new technologies, to fix bugs and improve transaction capabilities. The process will get smarter because each time a process is improved, all subsequent software that is generated will benefit from that change.

Essentially, the process will become a central repository for every programming technique ever learned.

Why keep suffering from the same mistakes? Red Erb Custom Software Development learns from proven mistakes and adaptes their technology accordingly.

For your convenience we have summarised the advantages and disadvantages of the Red Erb Custom Software Development Solution at the end of this guide (see Table 1: Overview of Red Erb Custom Software Development).

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Table 1: Overview of Red Erb Custom Software Development

<i>Advantages</i>	<i>Disadvantages</i>
Fewer resources required compared with traditional software development due to automation of software generation and subsequent testing	Still requires analysis and design stages to be completed manually
Allows for rapid solution delivery due to automated development and testing, taking less time than traditional methods	Some complex transactions may require manual development
Provides flexibility to allow a solution to be changed quickly and effectively to respond to market conditions, or simply change your operational requirements	The Red Erb Custom Software Development process will never be completed. It will continually evolve as it absorbs changes and improvements.
Decreases the cost of custom software development by reducing the time and resources required	
Ensures all documentation and help files remain current without any tedious manual work.	
Provides technical independence, allowing a solution to use any supported database, operating system or programming language.	
Reduces the chance of human errors during development and testing phases	
The flexibility of the software development enhances the possibility of using it to integrate with existing technologies in use in your business	
Flexibility enables businesses to deliver a solution in a phased approach	
Enables the adoption of new technologies as they evolve, and new devices and user interfaces as a business matures	