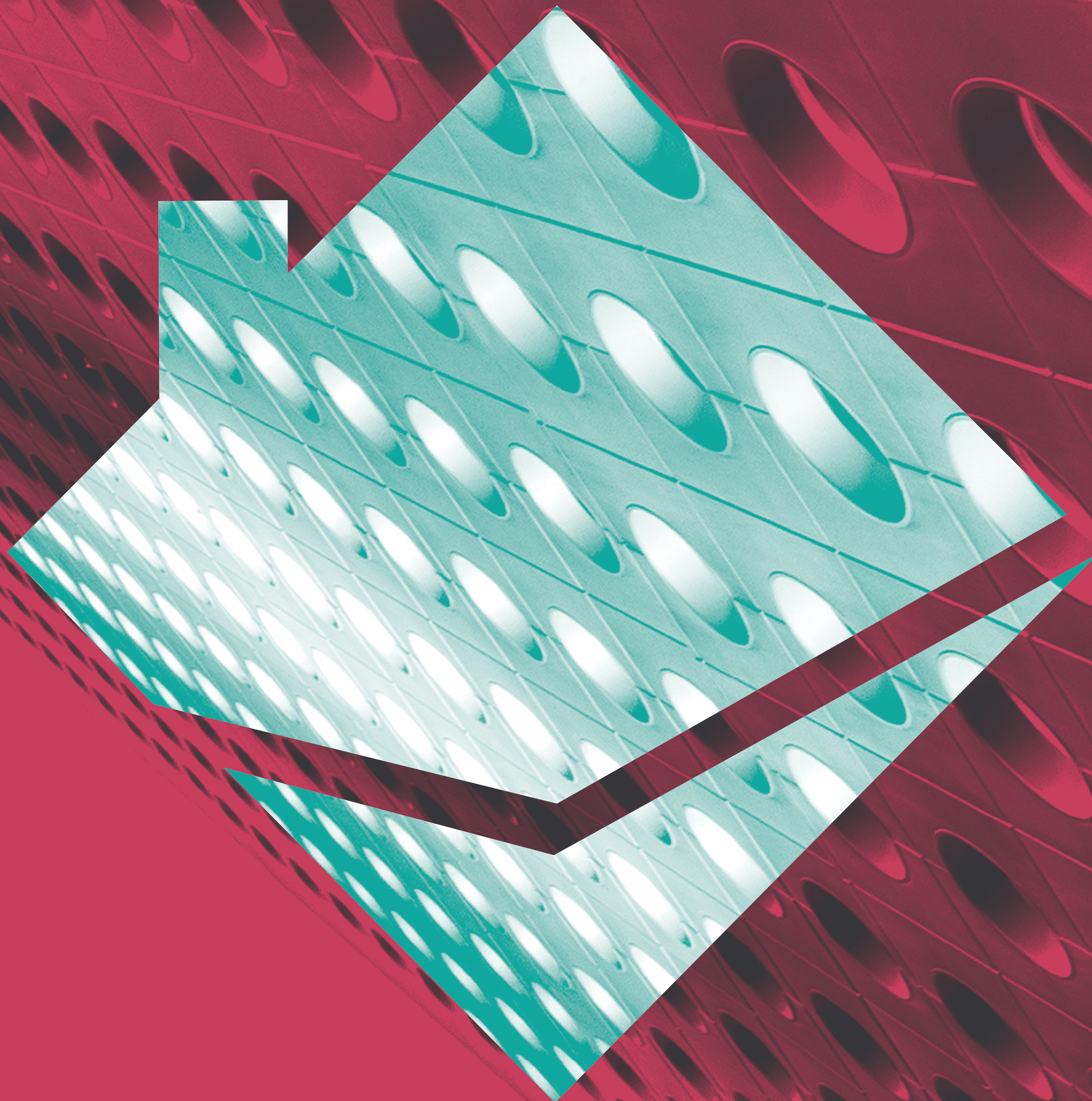


A STUDY OF USING A BESPOKE DATABASE APPLICATION OVER PRE-PACKAGED SOLUTIONS WILL IMPROVE THE OPERATIONS OF A SMALL BUSINESS



Cavi Clear is a construction company that previously operated using a mixture of paper-based documentation and digital storage using Microsoft Excel. The records contain information of customers, job history, employees, employee holidays, and job payments. Overtime the solution evolved into a sluggish process of viewing and entering data as more data points for client's were added and often exceeded the view of traditional monitor screens which caused interruptions in the business process. A new solution was needed to cater more to visually representing data in a more digestible format and support the users in ways of filtering, searching, and maintaining records. The objective focus was to collect the needs of the business in relation to the new system, critically assess which software packages and methods are most appropriate for development, design and build the system and conduct interviews with employees to determine the overall success of the project. Aspects that were present in the old system such as data points were preserved within the new software solution. Discussions were held with

the client to establish what the new solution needed to be and what features were critical in helping the business process which resulted in being a web database application. The purpose of it being a web application helps towards the business in accessing the new system from any location and any device with minimal setup. The software included to develop this application was HTML & CSS to develop the elements needed, JavaScript to help with responsive design, PHP in the backend to move and store data, and lastly Craftable Frontend framework which aids administration interfaces, CRUD generation, and authentication. Functionality testing was applied to test all possible aspects of functionality that the user may interface with in normal use. This was used to ensure that visual aspects, data entry and backend functions that were implemented work correctly. Client user testing was used to determine feedback from the client by allowing them time to use the system and a follow up discussion was held to obtain insight into the client's opinions on the system. Thirteen questions were posed towards the client that

covered aspects of first impressions, navigation, data entry, account features, areas of frustration, and whether it met their expectations and if they would use it for their business. To determine success of the project, information derived from interviews during the testing phase was used to gather feedback to judge the client's opinion on whether the project exceeded their expectations in terms of functionality, how easy it was to use, and whether they would incorporate it into their daily business operations, in which the client concluded they would. As the project was to prove or disprove the hypothesis, the background research which looked at supporting case studies that displayed that bespoke software could improve business operations. Along with the supporting evidence of the client where in their opinion it would improve business operations, in conjunction does heavily support the notion that bespoke software can improve a business over pre-packaged solutions which to note should tailor closely to the needs of a business.

The screenshot displays a web application interface. On the left is a dark blue sidebar with a 'CONTENT' menu (Customers, Employees, Jobs, Holidays) and a 'SETTINGS' menu (Manage access, Translations). The main area shows a 'Holidays' table with columns for selection, ID, Name, Start date, and End date. Below the table, it says 'Displaying items from 1 to 4 of total 4 items.' At the bottom, there are two form sections: 'New Employee' and 'New User'. The 'New Employee' form includes fields for Name, Mobile, Email, Job title, and Notes. The 'New User' form includes fields for First name, Last name, Email, Password, Password Confirmation, and a dropdown for Roles.

	#	ID	Name	Start date	End date	
☐	1		Jeff	2022-03-06	2022-03-12	 
☐	2		Aaron	2022-03-03	2022-03-07	 
☐	3		Jeff	2022-03-24	2022-03-26	 
☐	4		Martin	2022-04-01	2022-04-15	 

Displaying items from 1 to 4 of total 4 items.

+ New Employee

Name: John Doe 

Mobile: 01234567890 

Email: JohnDoe@email.com 

Job title: Site Manager 

Notes: Payment per day is £100 

 Save

+ New User

First name: John 

Last name: Doe 

Email: JohnDoe@email.com 

Password: 

Password Confirmation: 

☐ Activated

☐ Forbidden

Language: en 

Roles: Administrator 

 Save

