



Case Study

H&K International

A B2B e-commerce solution

H&K International, a leading supplier of kitchen equipment, wanted to upgrade their legacy system (being used for internal project management) to a newer technology. Additionally, their existing e-commerce website was to be revamped to provide improved features such as online ordering, recurring orders etc. H&K teamed with Icreon to achieve this. Based on the requirements Icreon designed and developed the solution on the .Net framework. The solution provides H&K with a better and more efficient means to manage their business processes.

Customer Profile

H&K International is amongst the leading manufacturers and suppliers of kitchen equipment for the food service industry. Established in 1975, H&K now has a global footprint with operations in several countries including USA, UK, Canada, Ireland, Australia, Spain and Mexico. Several leading restaurant chains such as McDonald's and Subway are some of H&K's biggest customers.

Business Requirements

For over a decade H&K were using an ERP system to track and manage their operations. With time they felt that the system was becoming cumbersome to maintain and integrate new features with it. Keeping this in mind and also to take advantage of what latest technologies have to offer, they wanted a web based solution that would serve as an enhancement to the ERP system and also streamline and automate various other business processes.

In addition, they wanted to revamp their existing website to provide better and more improved services to their customers. Features such as online ordering, recurring orders etc were required for their customers. The back-end solution was also required to enable H&K staff to manage the website. The proposed solution was to be synchronized with the ERP system to retrieve product/customer information and send order information.

Developing an e-commerce solution

The solution has been developed on the Microsoft .NET framework. Since H&K were planning to run their ERP application and the web application parallelly, both had to be synchronized. All product related data including prices & taxes and customer data was to be retrieved from the ERP system. Additionally, the web application data (such as the details of the orders that have placed etc) was to be sent to the ERP system. Web services have been used to handle this synchronization. A third-party replication tool has been used to transfer the data from the ERP system (using a DB2 database) to the web application (using a MS SQL database). Windows services have been written to handle tasks such as recurring orders, e-mails to be

sent to customers and other maintenance activities. Multiple freight companies have been integrated with the solution.

E-commerce Website

As an enhancement to their previous website, we have designed and developed the all new B2B e-commerce website wherein customers can order products online. The website has been designed to serve various H&K companies located across the globe. The information and products for each company can vary (configurable through the administration area), with customers only being able to see the information pertaining to the company that they are associated with. The website is also available in multiple languages.

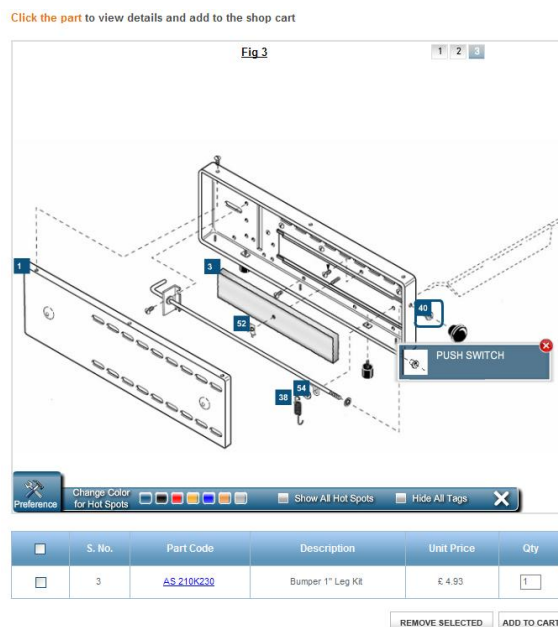
Existing H&K customers (i.e. store) can login to the website using the credentials provided by H&K (these can be generated for them via the administration panel). New customers can fill-out an online registration form, but need to be whetted by the H&K staff before their accounts are setup. The accounts will be active once the details have been synchronized with the ERP system.

Upon activation customers can login to the website to order products for their store. The product catalogues are categorized by store area and list all products available for the customer. Detailed descriptions for each product are available including features, images, technical specifications & manuals (downloadable as PDF). Cross-sell and up-sell features have been implemented; at the time of purchasing a product customers are prompted to purchase other related products.

In some cases a product may have spare parts associated with it. For such products an exploded image of the product with all spare parts marked-out has been provided. This exploded view is interactive and has been rendered through Flash. Customer can mouse-over a spare part to see its details. We have developed a **desktop tool** to generate such exploded images for products. The desktop tool is integrated with the administration module, only those products that have spare parts will be available in the tool. Once the image has created it can be uploaded to the server directly from the tool itself.

Based on how their account has been setup, customers can purchase products on credit or via credit card. They can also select the entire order has to be delivered in a single shipment (in this case the order will be shipped only when all products ordered as in stock) or multiple shipment (as products are available they will be shipped). Multiple freight carriers have been integrated with the solution. Customers can choose the most suited option. Shipping charges are levied accordingly.

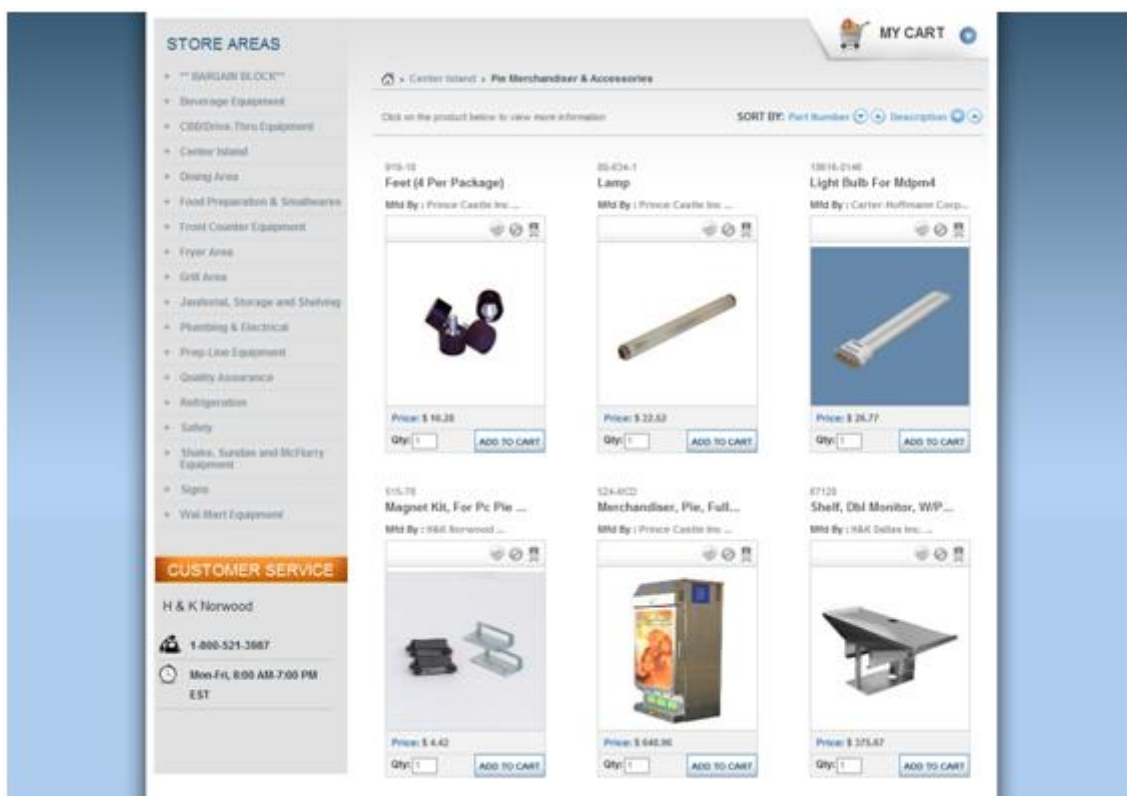
Customers can also request quotes for special products. Orders for such products can be placed once H&K staff has got back to them with additional information about the products. These requests can be tracked



Screenshot of the Exploded View

through the website itself. Recurring orders, both automatic (credit card details need to be saved and the order will automatically be placed at the specified interval) and manual (the user will only be reminded of the order via e-mail) can also be set. A quick order feature has been provided, allowing customers to directly add products to their shop carts based on the part number, thereby saving time from having to search for products.

All order details are transferred to the ERP system. A history of all orders and invoices will be available to the customer.



Product Listing

Customers can create accounts for their staff members and can also specify their access levels within the main account. They have the option to enable an order approval process for orders above a certain value or that have been placed by specific customers. All such orders will be flagged as "Pending" till such time that the authorized users approve them.

A customer has the option to be linked to more than one store. The website allows them to manage the details of such stores and also place orders for specific stores.

The website includes informative pages (managed through the administration area), allowing customers to get information about the H&K company, contact details, browse through FAQs etc.

Administration Module

The solution comes equipped with a web based administration panel, allowing H&K staff to administer the website as well as manage customers in a more streamlined and efficient manner. For ease of use, the module has been divided into sections – each representing a specific area that can be managed. A role based system has been implemented enabling a staff member's access to be restricted to specific sections and features. Through the module, the following tasks can be performed:

- **User Management:** Herein staff accounts can be managed and permissions assigned. Active Directory is being used to for maintaining login credentials hence the user data needs to be imported into the system (from the Active Directory) before permissions can be assigned.
- **Customer Management:** This section can be used to manage all customers. Herein all new customer requests and can be processed and accounts setup. Additionally, any address change requests submitted by customers can also be processed. H&K staff can generate web logins (i.e. usernames & passwords) for existing customers. The system also allows dormant accounts to be tracked.
- **Manage Products:** All product related information is shown here. This information is retrieved from the ERP system. Images (single or bulk) can be uploaded for products and manufacturers. Additionally, manual and technical specifications can be uploaded and attached with products. Rollout programs are also shown and H&K staff can upload additional information and forms (for offline subscription) about the program. Specific items can be flagged as “new arrivals” and the rules for cross-sell and up-sell can also be set.
- **View Orders:** Herein the H&K staff can view all sales orders that have been placed and can also process special quote requests.
- **Create Promotions:** Multiple types of promotions (such as buy one get one free, discounts, coupons, free freight etc) can be created for products. Promotion eligibility criteria can also be set e.g. product that the promotion is applicable on, order value etc.
- **Manage Settings:** This section can be used to specify preferences for H&K companies e.g. customer care numbers, languages to be offered, e-mail ids to be used for communication with customers etc.
- **Manage Content:** Herein the content for various pages such as FAQ, About Us, and Terms & Conditions etc can be updated.

The screenshot displays the 'Customers W/O Web Login' page in the H&K Administration system. At the top, there is a navigation menu with options: Admin Users, Customers, Products, Orders, Promotions, Settings, Content, and Reports. Below the menu, there are search filters for 'H&K Company' (set to 'H & K Equipment Ltd'), 'Store No.' (set to '0001'), and 'Customer Type' (set to 'Customers W/O Web Login'). There are 'SEARCH' and 'RESET' buttons. Below the filters is a table with columns: Store No., Customer Name, Email Id, Phone, and Select All. The table contains several rows of customer data, including AB002, AB003, AB004, AB005, AB006 (AB FINANCE AND LEASING), AB007, AB0081, AN001 (MCDONALDS ANDORRA), AN009, and AS02. A 'GREATE WEB LOGIN' button is located at the bottom right of the table. The page also shows 'Total Records: 8398' and a pagination control at the bottom right.

Store No.	Customer Name	Email Id	Phone	Select All
AB002				<input type="checkbox"/>
AB003				<input type="checkbox"/>
AB004				<input type="checkbox"/>
AB005				<input type="checkbox"/>
AB006	AB FINANCE AND LEASING	BAEVE.A.WALSH@AB.E		<input type="checkbox"/>
AB007				<input type="checkbox"/>
AB0081				<input type="checkbox"/>
AN001	MCDONALDS ANDORRA	GORAU@PYRENEES.AD		<input type="checkbox"/>
AN009				<input type="checkbox"/>
AS02				<input type="checkbox"/>

- **Reports:** Herein a wide variety of reports can be generated such as sales, products not sold, orders not received, and orders over credit limit etc.

This solution is a perfect example of 'legacy modernization' wherein a legacy system is enhanced by adding new user interfaces, to run an organization effectively and efficiently, so as to meet the required business objective of serving the customer better.

Technologies used in developing this application are:

