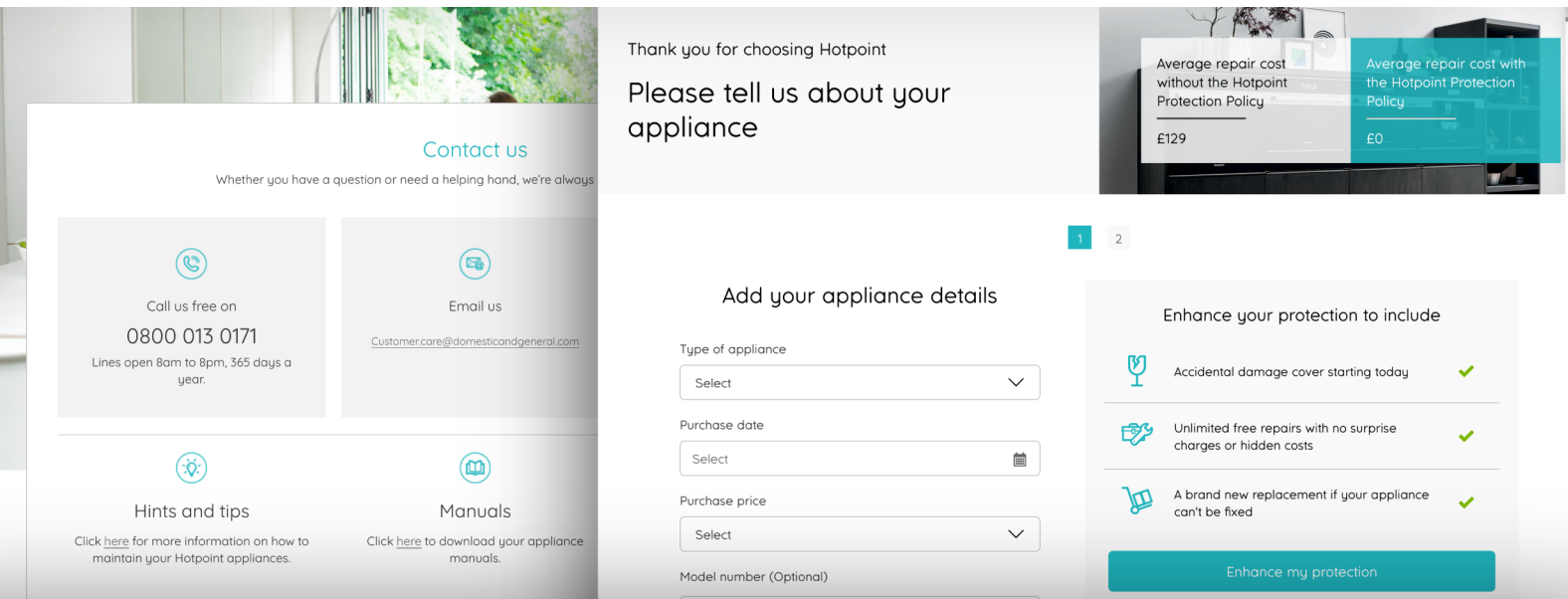


## CASE STUDY

# Domestic & General – Magnolia CMS and E-Commerce Development



## INTRODUCTION

**Domestic & General (D&G) are one of the leading providers of warranty services for household appliances and consumer electronic products. They have a presence in 14 countries and in excess of 16 million customers.**

This case study describes the solution that Priccept implemented to deliver over 200 e-commerce sites to serve Domestic & General's supported brands across the world.

## BACKGROUND

Domestic & General had previously developed a system for selling extended warranties online, known as Online Registrations (OLR). The sites were originally developed and maintained in-house, with all changes being managed by D&G's web development team. This process had become a bottleneck for the business as trivial changes were being forced down the main development pipeline and were subject to delays from scheduling, implementation, and IT release processes. Making changes was a slow and laborious process and it was clear that a better solution was required to serve the business more efficiently.

It was identified that a Content Management System (CMS) would empower business users to be able to directly manage the OLR websites. Magnolia was duly selected, along with Priccept as the implementation partner.

The solution at its core is an e-commerce system that allows users to register their

appliances for manufacturer guarantees and purchase enhanced protection to cover accidental damage and unlimited repairs. Protection plans are registered and purchased through integration with Domestic & General's mainframe system, with WebSphere Commerce Suite (WCS) used as the middleware layer. Magnolia is used in "headless" mode to provide content and configuration to the UI layer and is integrated with WCS in order to provide a single API end point for the UI layer to interact with. The UI layer is a Single Page Application (SPA) developed in AngularJS. This solution is a classic example of a decoupled architecture with each element – UI, e-commerce, and content management – connected through API integration, whilst being logically and physically separated. This provides Domestic & General with a system that is easy to maintain and is future-proofed since each component works as an independent entity that can be replaced with an alternative system if required.

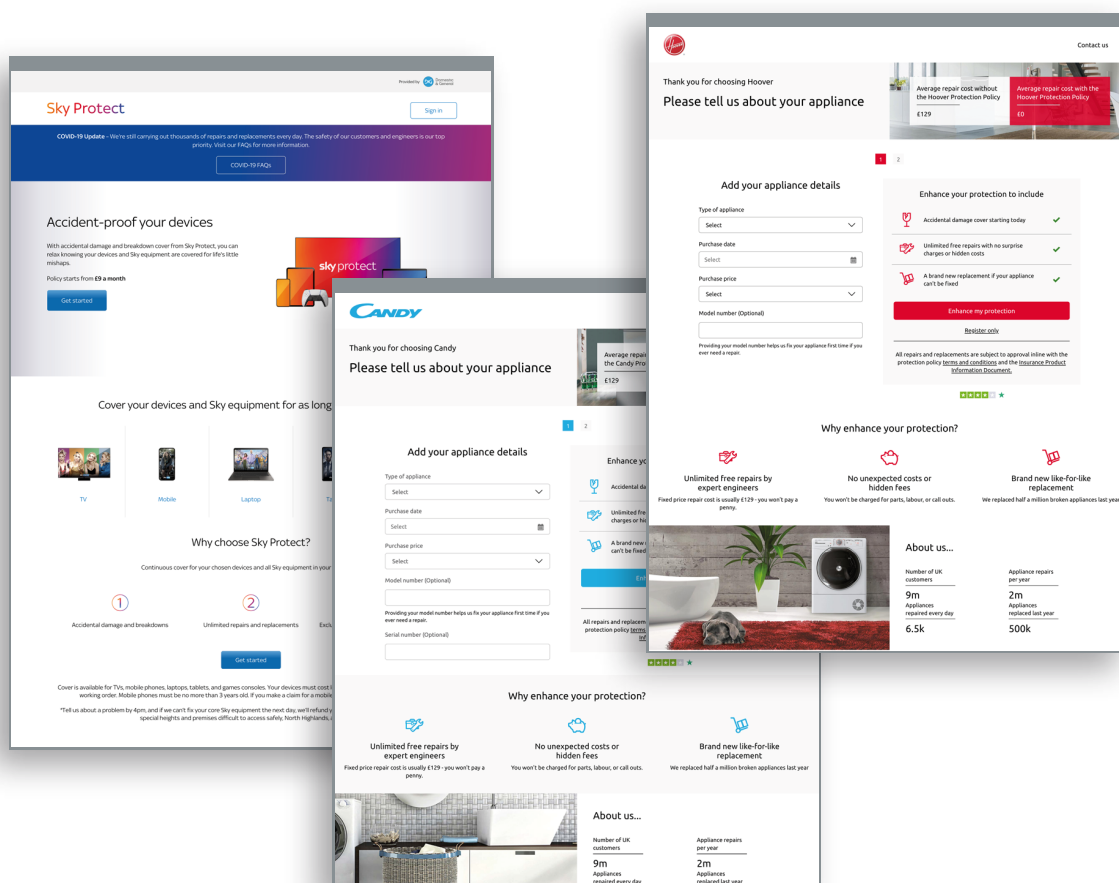


Figure 1: Multi-site, multi-brand, multi-language e-commerce sites

## THE SOLUTION

The OLR system is comprised of the following components:

- **Single Page Application (SPA)** – The user interface for each OLR application is implemented as an AngularJS app that calls Magnolia via REST services. This allows the user interface to be developed independently of Magnolia, by a separate front-end development team.
- **REST APIs** – A set of custom-built REST services that expose data from Magnolia to the Single Page Application.

- **WebSphere Commerce Integration** – All warranty registrations and extension transactions are processed via calls to WebSphere Commerce Suite (WCS), which in turn makes requests to other D&G downstream systems.
- **Application Logging** – With multiple integrations and potential failure points, maintaining detailed logs is an important requirement. The OLR uses Logstash to send log data to ElasticSearch Service in AWS, where it can be analysed using Kibana.

- **Dynamic Site Mapping** – This component dynamically maps brand-specific sub-domains to sites (parent content nodes) within Magnolia, eliminating the need to configure each site manually.
- **Content Authoring** – The Magnolia content editing suite allows users to manage brand-specific site content in multiple languages and to edit configuration data required by the SPA and by WCS.

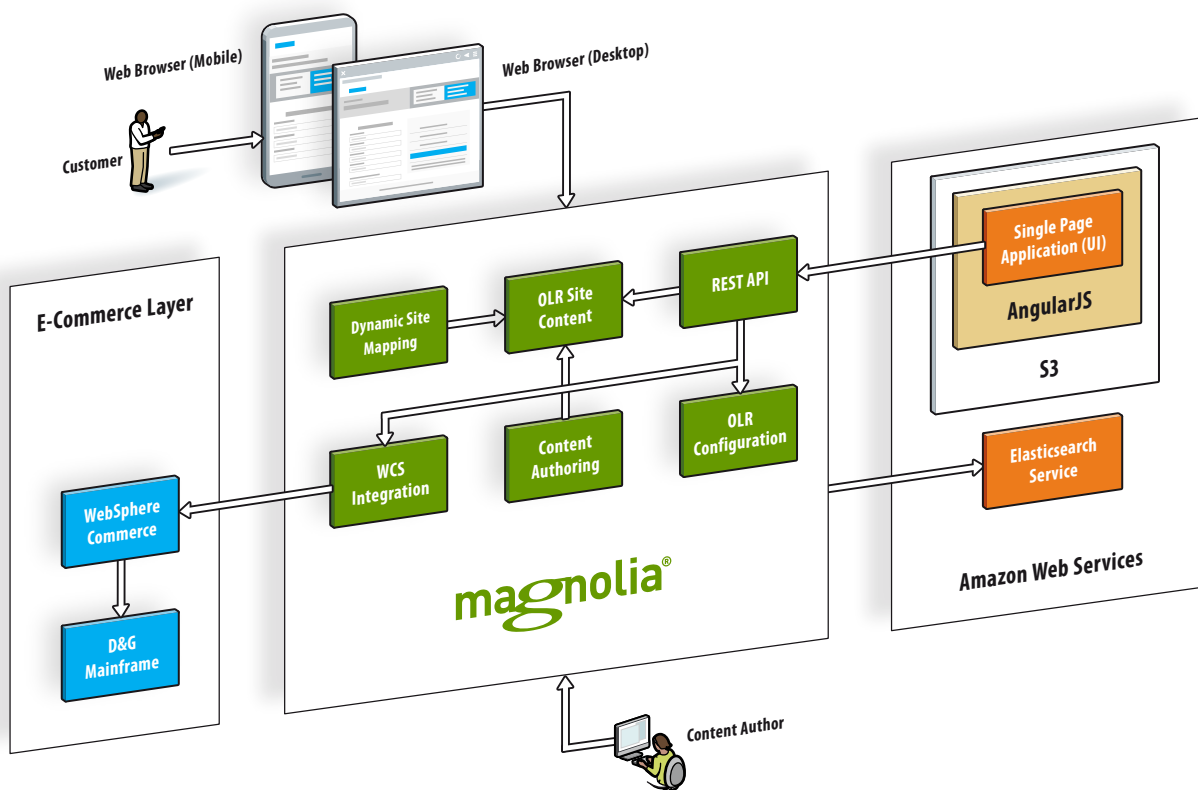


Figure 2: Online Registrations technical architecture

## WEB OPERATIONS

Following the initial development phase, Priocept transitioned from major product development to providing Business-as-Usual (BAU) support services. Priocept continue to provide the following services to Domestic & General:

- **CMS Support** – Providing general support to the website editors to ensure the smooth running of day-to-day content authoring operations.

- **Upgrades** – Upgrading Magnolia and supporting software to patch security vulnerabilities and to take advantage of new features.
- **Development Services** – Providing incremental upgrades and enhancements to the platform to meet changing business needs.

## CONCLUSION

Priocept implemented Magnolia to act as middleware between D&G's WebSphere Commerce and Online Registrations systems. By using Magnolia's powerful REST APIs and building a custom integration to WCS, Priocept were able to implement a solution that allows new sites to be rolled out without software development or IT support. An inefficient legacy IT operation was transformed into a simple process that web content editors can manage themselves, allowing them to roll out engaging e-commerce sites for new brands in matter of days.

# PRIOCEPT

SOFTWARE ENGINEERING ■ E-COMMERCE ■ CONTENT MANAGEMENT

WEB OPERATIONS ■ CLOUD INFRASTRUCTURE ■ IoT / EMBEDDED