CASE STUDY

Integrated Knowledge Resource Library

carbon™
LINKED DATA PLATFORM

00

INTEGRATED KNOWLEDGE RESOURCE LIBRARY

Case Study at Glance

In any company, the knowledge resources represent one of the most valuable assets, and it is common for these resources to be shared amongst all of a company's employees.

Resources are usually either in a digital or physical format and come from different sources.

Big companies with teams spread across different locations may use a Knowledge Management System (KMS) that involves many software modules, procedures, and policies. However, these types of systems require dedicated IT and HR departments that are not necessarily available all the time to make improvements and provide support.

Another challenge faced by enterprises is that KMSs store and manage the knowledge resources in proprietary and closed mechanisms, making them complex and expensive to migrate.

Implementing a system to manage, locate, and request knowledge resources in a company is key. Building this system with Linked Data principles in mind ensures it is ready for integration with other enterprise-class tools and with an open and W3C-standard approach.

The Challenge

Organizing, tagging, relating, and discovering knowledge resources is a very well-known issue that emerges in almost all companies. The most common knowledge resources are books, magazines, tutorials, courses, manuals, procedures, etc.

The number of potential resources may increase quickly, having heterogeneous formats, sources, and locations.

03

INTEGRATED KNOWLEDGE RESOURCE LIBRARY

The Solution

This proposal was implemented using Linked Data principles, enabling any company with a set of knowledge resources to manage, track, loop up, locate, and request any of its existing resources.

All the metadata related to the knowledge resources is stored in a metadata manager that exposes an API (using REST concepts). The API can be consumed by any client that is able to make requests (such as a mobile application, a web portal, a digital experience platform, a content management system, or even a bot).

The response provided by the metadata manager is given in a web-ready format (usually JSON, however, Carbon LDP is able to deliver data in other standard and well-known formats) which can be immediately taken and processed or rendered in a presentation layer. In this version of the product, the data delivered by the metadata manager is presented in a web application integrated into an open source digital experience platform.

04

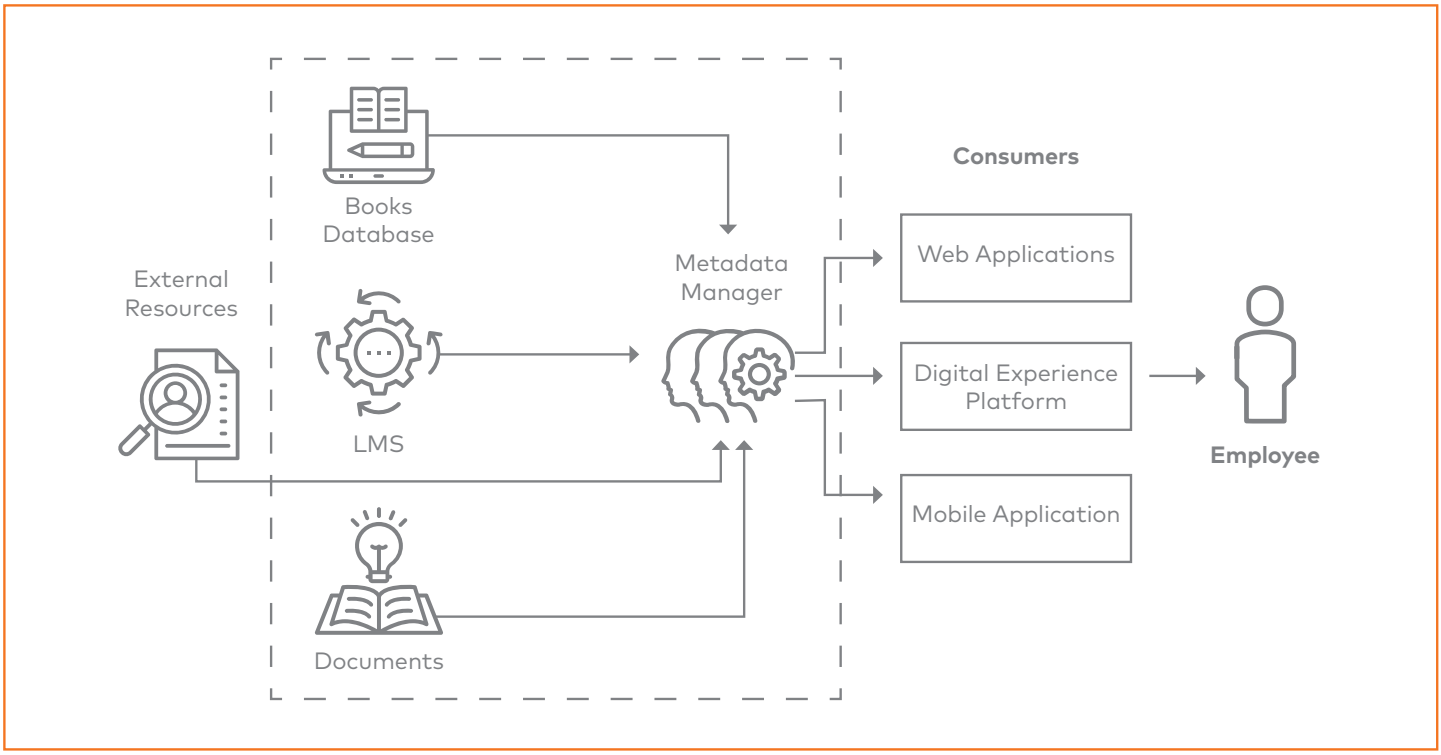
THE SOLUTION

Advantages of using a metadata manager

Carbon LDP is a platform that speeds up development and connects heterogeneous data sources

For this implementation, the main component is the metadata manager, which was built using Carbon LDP.

Metadata can be increased as the number of resources grow and depending on the availability of other data sources, e. g. Learning Management Systems (LMSs), books databases, documents and media libraries or even other external sources.



Overall, the metadata manager represents the central element where multiple data sources and multiple resources are exposed to the final users. Changes in the resources' origin or the tools exposed to the end-users will be kept isolated from the information; hence, providing a stable environment for ever-changing data and tools

05

THE SOLUTION

Features available in the first version of this system

Resource catalog highlighting featured resources.

Search components that allow looking for specific resources or resources by topic.

Tagging to classify resources.

Rating module, which enables reviews per resource, allowing any user to recommend resources to colleagues.

Tracking a resource. When something is not available, the employee can use the "subscribe to the resource" action to get a notification whenever it is available.

06

INTEGRATED KNOWLEDGE RESOURCE LIBRARY

The Results

Metadata was integrated with an initial set of semantic documents describing books and journals in both digital and physical formats.

There is a client-side web application built with cutting-edge web frameworks and tools that enrich the user experience and allows the user to find valuable resources depending on several search criteria.

There is a list of different types of data interacting at the data model level.

The resources library is prepared for horizontal scaling, meaning, if thousands of resources are added in different locations around the world, an infrastructure strategy can be set to support as many users (employees) as needed.

carbonldp.com