Information Architecture and CCM

Introduction

In this article, we take a top-down view, from the business enterprise architecture to an information architecture, the essential component of every content management strategy. We also look at what we call a **product information model**, which takes the concept of information architecture to a more detailed level, helping organisations that build a number of product variants deliver the right type of information to support a specific product variant, or type, or model.

Today, one of the key enablers of any company's business operating model and digital strategy is an enterprise architecture. Enterprise architecture (EA) is a framework, or organising logic, for the way core business processes, IT systems, and also people (and human functions), integrate and work together.

EA allows for better strategic differentiation and is a key to longer term efficiency, as well as helping standardise technologies and business processes, and generally improving performance and productivity.

Standard core business processes include Product Development, Marketing, Sales, Accounting, Order Fulfilment, and Management. Examples of supporting business processes are Financial Analysis & Reporting, Quality & Process Improvement, Information Technology, Legal, and HR.

A vital component and subset of enterprise architecture is **Information Architecture**.

Information architecture

Like EA, information architecture (IA) is also an organising framework that spans a number of key processes across the company. These include product development, sales and marketing, corporate communications, customer support, technical communications, training, IT, and information management.

IA is a way of designing, structuring, and understanding the complex information environments found in business corporations. A good definition of IA is: *the framework for organising information to help users find what they need, and for enabling and supporting the efficient management and delivery of content*.
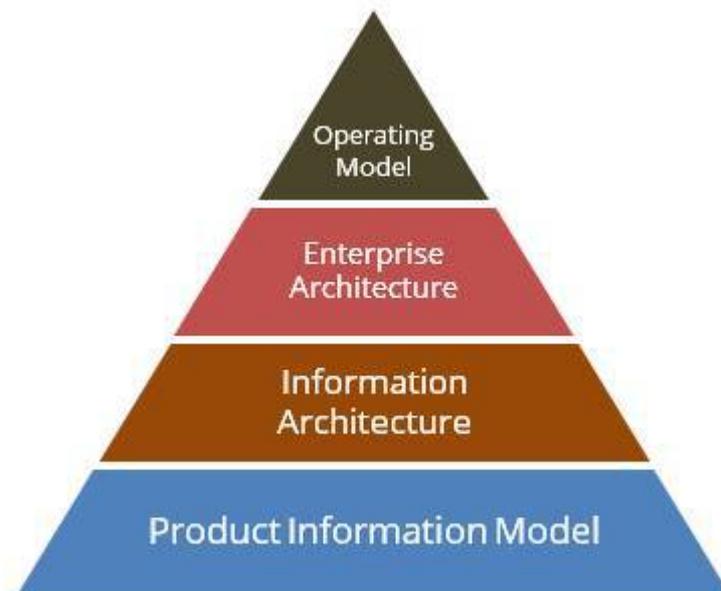
Just as an enterprise architecture is an essential prerequisite for developing an effective information architecture, the IA is itself an essential requirement for companies investing in or improving content management capabilities.

The IA is about bringing order to what information content currently exists and making the user experience (UX) better and more productive. It helps anyone who uses, creates, and maintains information content to do their job more effectively, by organising available material to make it more usable and easier to find.

Content can be information of any kind, such as data, text, images, videos, whole documents, software modules, code examples, applications, and online help. Content can also be categorised in different ways to support core business processes, for example product information, legal information, and accounting data, and also to support different user profiles, job functions, and regulatory requirements.

The IA also provides the framework for what we refer to as the *Product Information Model*. We cover that in more detail below.

> *Many people are curious how IA is related to user experience (UX) design. UX designers practice IA every day; the two are closely connected. Put simply, IA is an important skill within UX and other disciplines, such as content strategy, technical writing, library science and interaction design.*
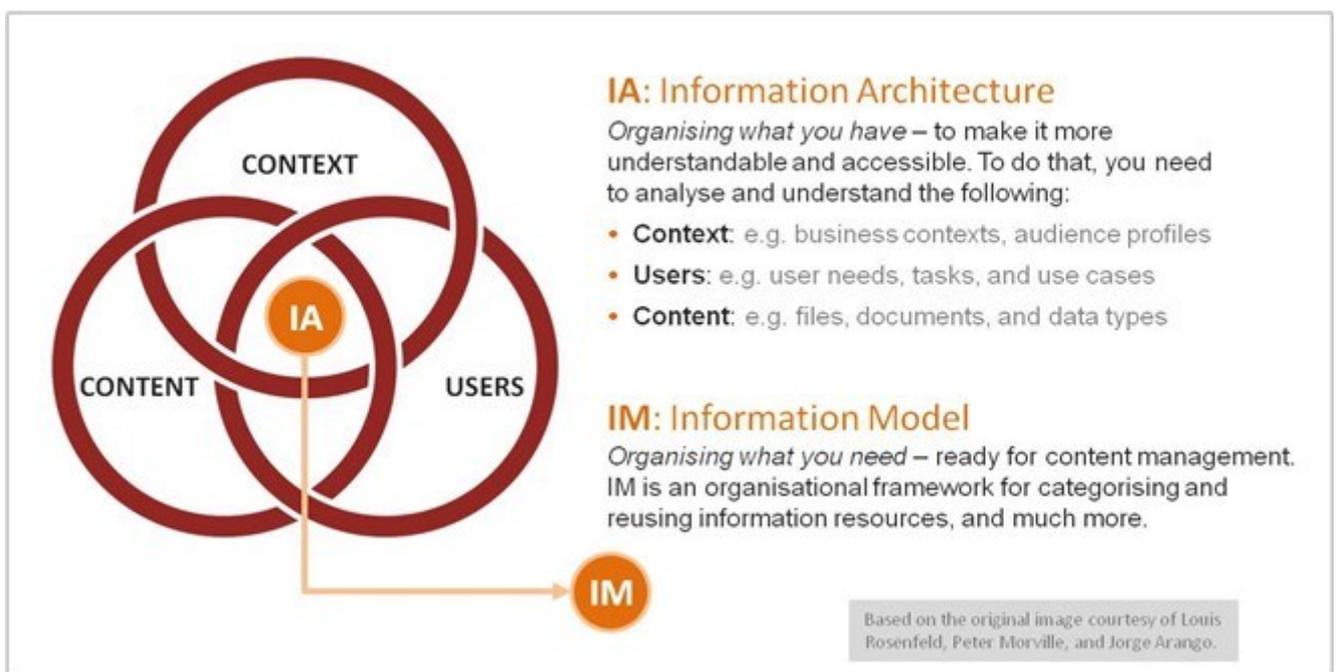
↻ Source: Information Architecture Institute

Since the arrival of the Internet, information architecture has also become associated with the design and planning of websites. This has also been an important development, particularly in helping companies build an online presence that maximises UX and information accessibility.

Content strategy and the information model

Another equally important prerequisite and stepping stone in a content strategy is the Information Model (IM). It's a detailed blueprint of how to organise your content so that it can be **reused** in different ways and **distributed** in different ways, with the flexibility that better serves the needs of target audiences, wherever they are. *Which, by the way, is also a good definition of what content management is really about*.

Whereas IA is about organising information assets so they can be located more easily and make more sense to users searching for information, the IM goes one step further. It prepares and profiles (or 'models') information ready for *re-use* in a content management solution or, more especially, in a component content management solution. This is summarised in the illustration below.

IA: Information Architecture

Organising what you have – to make it more understandable and accessible. To do that, you need to analyse and understand the following:

- **Context**: e.g. business contexts, audience profiles
- **Users**: e.g. user needs, tasks, and use cases
- **Content**: e.g. files, documents, and data types

IM: Information Model

Organising what you need – ready for content management. IM is an organisational framework for categorising and reusing information resources, and much more.

Based on the original image courtesy of Louis Rosenfeld, Peter Morville, and Jorge Arango.

Let's put this another way. Whereas IA is a layer that organises and describes all the company's information assets that get created, read, updated, and deleted or archived, IM is what results when we start identifying and classifying the informational content we want to work with for our CM or CCM solution.

> *An Information Model is an organisational framework that you use to categorise your information resources. The framework assists authors and users in finding what they need, even if their needs are significantly different and personal. The framework provides the basis on which you base your publishing architecture, including print and electronic information delivery.*

⤺ Source: Dr. JoAnn Hackos, Comtech Services

More than that though, the IM is an essential part of a reusable, single-source, component content management strategy. Without a well-designed IM, no content management solution could even begin to be conceived.

The product information model

Overview

Customer experience is now becoming a huge market differentiator and companies risk ignoring that at their peril. It's reassuring that people talk much more these days about customer experience and the customer journey.

A product information model (PIM) is, as the name suggests, the IM for a specific product, or, more usually, a family or suite of products, dealing with the information content that would be required to accompany a product and be associated with it.

It's a model of the information needed by customers and users at every stage of the journey they take in using the product (or service) to accomplish a task or set of tasks.

The PIM helps you create, reuse, and deliver the most appropriate and effective informational content and digital assets needed by the customers and users of the product and its different variants, versions, or models.

Put in the context of CCM, the product information model:

- Helps customers do what they need to do and achieve what they need to achieve regardless of which product version or type they're working with.

- Helps manufacturers, vendors and suppliers assemble and deliver the right information to the right customer from a single repository, in a single place, without having to maintain different information sets for different product variants, in different places — where inconsistencies and errors inevitably creep in.

One of the first activities in preparing to build a product information model (PIM) is to gain a deep understanding of all relevant use cases and, for every use case, the user's goals,

the steps the user takes, and the tasks the user needs to accomplish in order to complete the journey and achieve those goals.

As the high-level example below shows, this is a good way of mapping use cases against tasks and functions in order to *home-in* on exactly where information is needed and the context in which it is needed. Therefore, each of those points or nodes would be a place where we can begin to identify and categorise the types of informational content required.
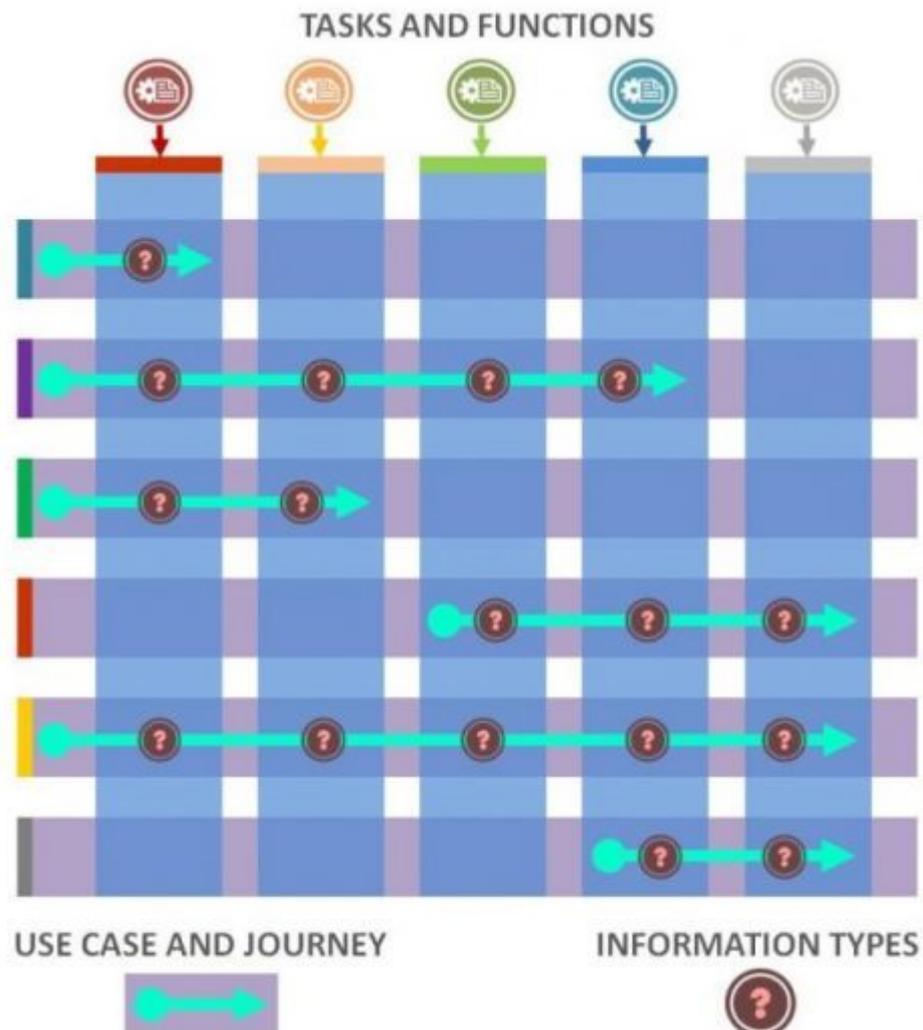
Note that in listing and analysing use cases, a common oversight by information architects and analysts is to forget to include the use case for the random requirement – *at any time and at any point along the journey* – to search for related information. This is a **generic use case** that we usually refer to as *ad-hoc information search and retrieval*.

Information types

One of the first information modelling activities you will need to undertake in your content strategy is to analyse and break down complex business, product, and technical information into more structured and logical categories.

These categories will make the job of finding the right information, and the right sort of information, that much easier. We call these categories **information types**. Information types impose a higher level of order and consistency to information content.

The standard information types widely used today include concepts, definitions, processes, procedures, objectives, examples, specifications, warnings, and error messages.

Here's an example. To illustrate why information types are so important, let's consider some typical business users who have just poured a cup of coffee, logged in, and now have to get on with a few actions on the morning's to do list.

They need to work through one of the use cases shown in the example above, requiring them to complete three tasks. They have completed one of those tasks many times before but, because of new company processes that recently went live, the other two are unfamiliar to them.

When they gets to the start of the second task, they makes a decision to open up the documentation library and search for the user guide to this task. That's where the problems start:

- The user manual is 128 pages long. A quick scan of the online table of contents shows the document describes at least 12 different tasks, including the second and third tasks.

- They click on the link and get to a description of the sequential steps they need to take to accomplish the next task. But they see there is no introduction or context information. They naturally feel they require at least a basic understanding of what they are about to do, before they go ahead and do it.

- So, they go back to the introductory chapter. But that in itself is 11 pages long and seems to be describing all the tasks and processes together generally. It's suddenly not clear, to say the least.

- Soon, fifteen minutes have gone by. They now have to re-think. Where else to go? Who to ask? Should they just forge on regardless and hope the system will correct them if they make mistakes?

Imagine if they had to spend time reading and sifting through the user manual prior to every task, and during the task, in order to get specific guidance or instructions. And there is also the chance that they will get stuck somewhere and have to cancel, go back, and start all over again. The clock is ticking, productivity and progress are diminishing, and the level of frustration and the risk of making mistakes are increasing.

Now imagine if, at the click of a mouse, they could get exactly the information – no more, no less – they needed at any point. Having the right information types in place,

easily and logically accessible, at the right time, would help and benefit them enormously.

66 *When customer experience is the bread and butter of a company, it makes sense to turn product documentation into a dynamic and intuitive asset that provides the right answers delivered at the right time through the right channel to customers.*

➲ Source: Hannan Saltzman, VP Product Management, Zoomin Software
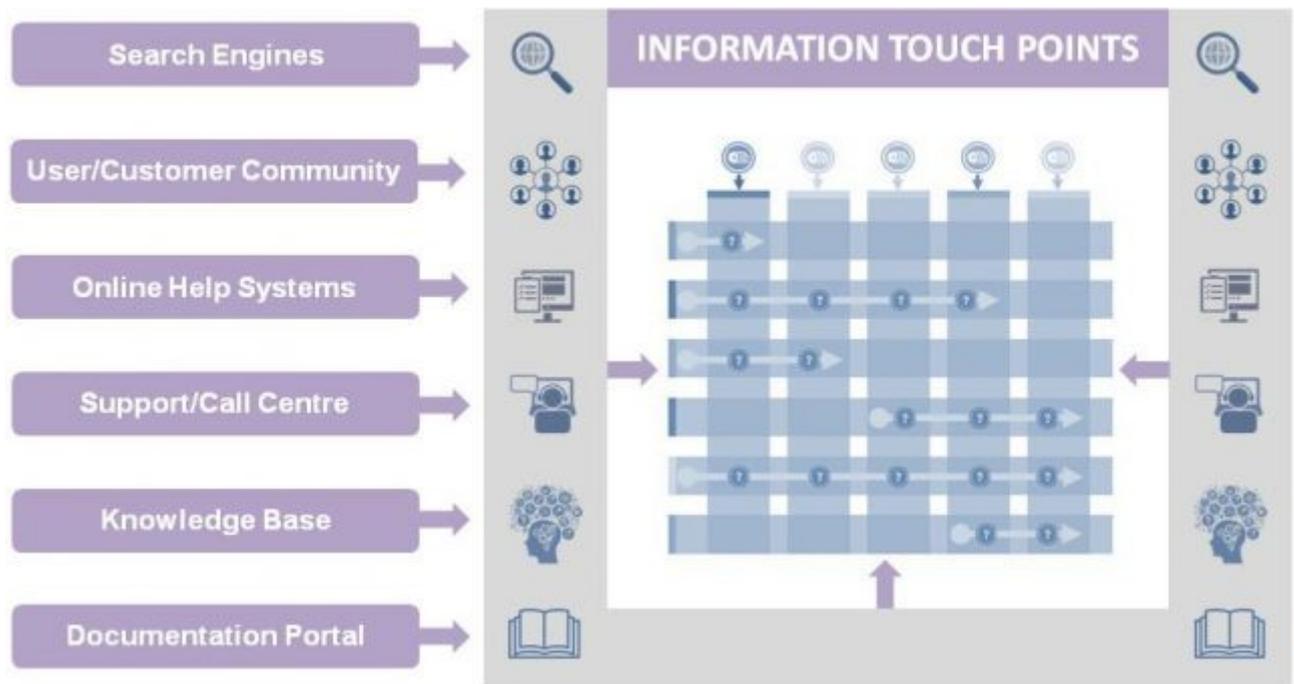
Information touch points

Another important preliminary activity when preparing to construct a PIM involves identifying and prioritising what many experts are now referring to as *user information touch points*.

As the term suggests, these are the points (along the user or customer journey) where the user needs to come into contact with (or *touch*) the supporting informational content provided with the product. This is where the user journey becomes a *two-way* process:

- Firstly, at any point, the user may need to **receive** supporting information relevant to the use case and the tasks or functions being carried out, or may need to locate information of *any kind*.

- Secondly, along the way, the user may also want to <u>give</u> information, such as feedback, comments and contributions, or to log issues and problems.

A good PIM is as much about planning and delivering the right information at the right time as it is about planning and delivering information through the right channel at the right time. But it's also about building in the processes for information exchange, for example ensuring that informational content can **flow both ways**: from system to user and from the user back to the system.

As summarised in the illustration below, examples of product information touch points and the appropriate delivery channel for them include: online help and search engines for initial or first level support; knowledge base and documentation portal for broader and deeper information searches; online user community for Q&As, collaboration, and problem/issue logging; and a call centre for standard (human) second level support.

In the past, content management strategists and information architects often overlooked the importance of product information touch points and user feedback mechanisms to the customer/user experience. Today, however, web and portal information architecture and design techniques are beginning to change that.

Product information models, coupled with underlying CCM technologies, **are doing the rest** — ensuring the right information is there (maintained in one place only) and that it's reused anywhere, across all the touch points where it's genuinely needed.

Summary

Information architecture is as vital to a successful CCM strategy as information touch points are to users who require informational content to support them every step of the way in the tasks they need to perform (and also, importantly, to help and support them acquire knowledge and expertise).

Just as enterprise architecture maps and connects up a company's processes and information assets, an information architecture and its resultant information model breaks down, categorises, and interconnects those information assets into usable, and *reusable*, informational content that delivers exactly what people need, when they need it, and where they need it.

A product information model takes this one step further. It addresses the needs of users (as well as third-party developers and other stakeholders across the value chain) in using (or customising) a specific product when a family of similar (but different) products or product models exists, *which is almost always the case*.