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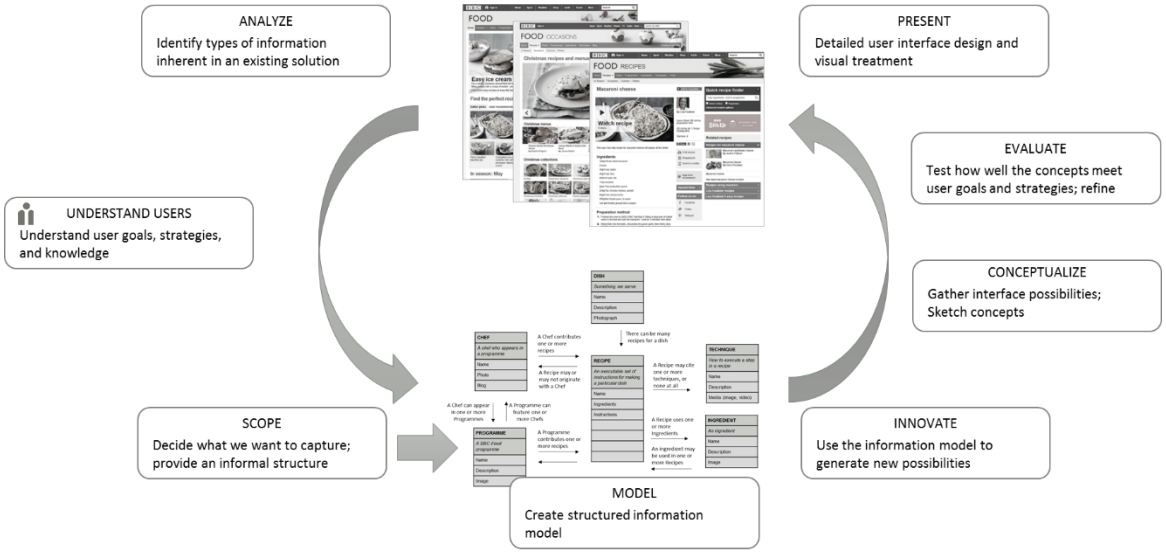
# Mapping Information to Experience

## A UNICORN BRIEFING NOTE




Martin Stares

June 2015

**Series introduction**

This Briefing Note is part of the series "Experiencing + Architecting Information". The series provides intermediate solutions designers with polished and practical insights into designing information rich systems.

It upon insights from information architecture and user centered design. As such, it will be useful to front end designers who need to know more about information, and information architects and analysts who need to know more about users.

The series is introduced in the Briefing Note entitled "Experiencing + Architecting Information", where we detail the approach and coverage. It might help to read this first. The remaining briefing notes drill more deeply into each topic, and for the most part can be read in any order.

We sincerely hope this series will help you gain in skill and confidence in our wonderful profession.

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**Expressing the information model in the user interface**

This Briefing Note explains how the information model can act as a source for user interaction possibilities.

In the series introduction "Experiencing + Architecting Information", we introduced two views of a user-facing solution, the user view and the architect view,

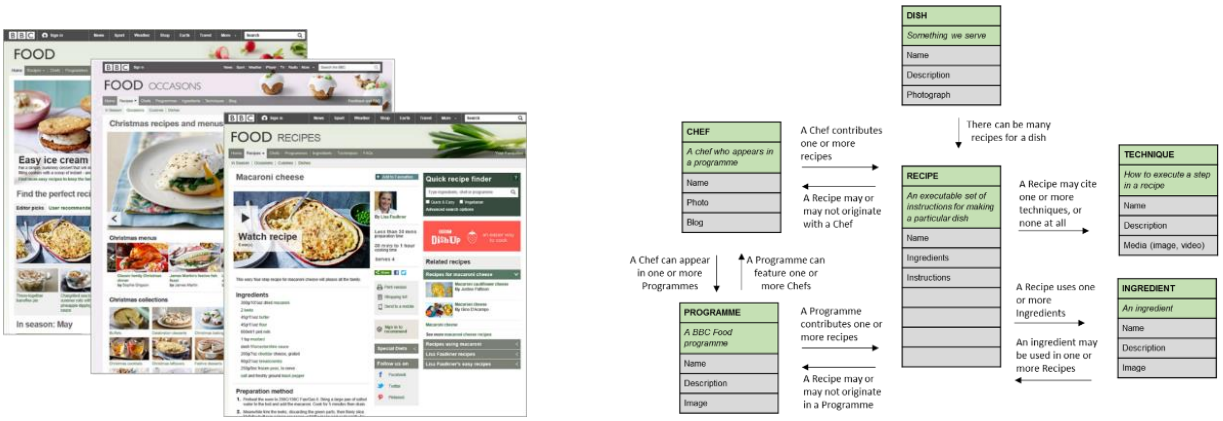


*Figure 1: User and architect views of a food site*

and showed how information analysis of a user-facing solution leads to a unique information model.

The opposite relationship is not unique; a given information model can be expressed as many different user-facing solutions. We are not talking about visual treatment and styling, but the overall presentation, packaging and flow of information.

The good news is that there are systematic correspondences between the elements of an information model and its expression in the user interface, and these form the topic of this Briefing Note.

Knowing these correspondences provides a rich palette from which to draw when designing your user-facing solutions. The actual choices made depends upon the user goals and strategies and the quantity of the information at hand.

You should be comfortable understanding information models. See "Information Analysis" and "Information Modelling" for details.

**Case Study**

We will use the example of a consulting group's microsite that we have used before.

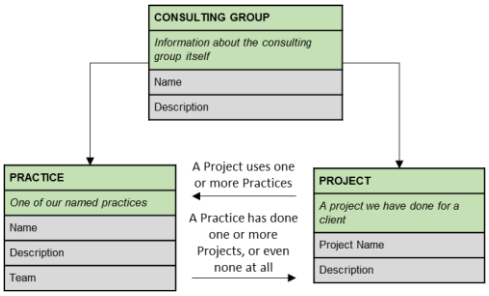


*Figure 2: Information model for consulting group*

Here is the simplest information model that we used. We will deconstruct it and show many different types of user-experience correlates.

**The Components**

Ignoring attributes and relationships leaves us with the component structure.

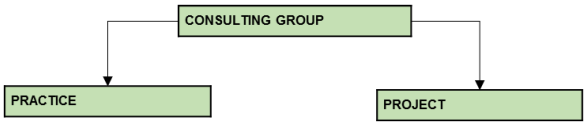


*Figure 3: Component structure for the consulting group*

This structure can get expressed in the user interface in a number of ways.

- Menu items: Project and Practice are very high, so they may be part of global navigation
- Search refiners: Project and Practice may be used as search refiners
- Search scope: Project and Practice may be used to define the scope of global search.

Of course, we could always use the information model itself as a visual navigation scheme, although this is not currently conventional.

## Attributes

Next we focus on the attributes.

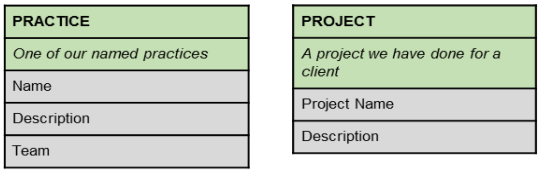


*Figure 4: Attributes*

There are many user interface possibilities.

- Detail pages: the simplest approach is to list all attributes of the component on a single page, for example a project page or a practice page.
- Packaging: for components with many attributes, we can control how much content is revealed at any one time, using tabs or popups, or preview-drilldown patterns.
- Information scent: attributes can be used to decorate a link. For example, a link to a practice page can include a small description and a thumbnail image.
- Useful combinations: attributes from multiple components can be combined into new and useful combinations to meet user goals. For example, a practice page may include information about some of the practice's projects.

## Instances of a component

There can be few or many instances of a component.

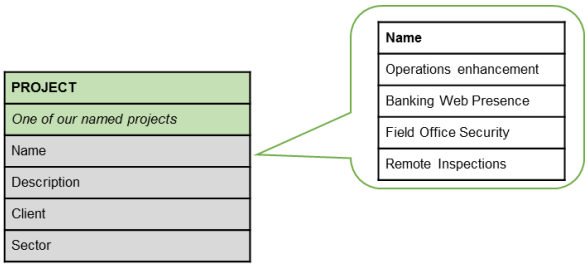


*Figure 5: Some instances of the project component*

There is a rich set of interface possibilities.

- There are a variety of conventional list formats, depending on the attribute's data type. We can use tables for textual attributes, galleries for images, calendars for date/time information, maps for geographical information, and charts for numeric information, etc.
- When a large number of instances is involved, we need to provide supplemental navigation. This may be based on categorization schemes that have been designed for the data, for example

industry codes for Projects. Alternatively, there may be conventional navigation for certain data types, such as zooming in and out of maps, or using sliders for date/time information.

**Instances with something in common**

These are instances of the **same** information type with something in common. For example, the diagram shows three projects that are related by being in the Energy Sector.

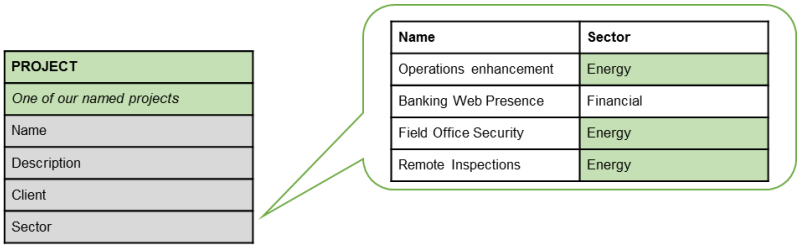


*Figure 6: Projects related by sector*

These relationships are often cued up as "More Like This" or "See Also" on an instance page. They can be used in several ways:

- A link to a page of related instances: for example, when showing the Operations Enhancement project page, we could display a link "More Energy Sector Projects".
- A list of related instances: for example, when showing the Operations Enhancement project page, we could display links to "Field Office Security" and "Remote Inspections".
- Filtering and organizing: the commonality can also be used to filter or classify large information sets. For example, we can organize projects by sector or filter them to show just the Energy related projects.

There can be many relationships of this type in a given information set. For example, the current example could also relate "Other projects for this client". In very richly connected solutions, we may end up with as many linkages as attributes, and need to manage this visually.

**Cross references to other types of information**

These are instances of **different** information types related by relationships in the information model. For example, this diagram shows the practices used in each project.

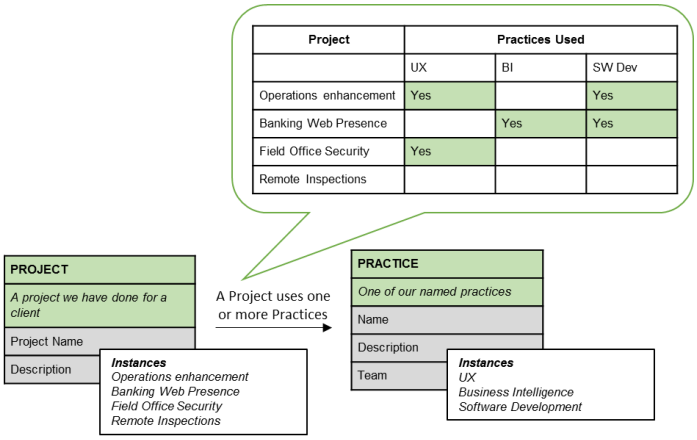


*Figure 7: Instances of how practice usage across projects*

The Banking Web Presence **project** has cross references to the Business Intelligence and Software Development **practices**. Conversely, the UX **practice** was involved in the Operations Enhancement and Field Office Security **projects**.

These cross references can be exploited in the user interface in many ways.

- Link to cross references from a page: we can create links on a detail page based on these cross references, e.g. a project page could have links to “Practices Used”, and a practices page on project page, or “Projects We Have Done on a practices page.
- Display cross references on a page: we can list related entities on a detail page based on these cross references, e.g. a project page could list the practices used, and a practices page could list the projects that it has done.
- Use for organizing or filtering: any attribute of a linked component may be used as a basis for organizing or filtering. In our simple model, we could:
    - organize Projects by the practice they used
    - filter Projects to those that used the UX practice
    - list Practices by those that have done most projects this year.

**Containers**

Repeating elements such as Projects and Practices often have associated containers. The container for projects might contain overview information about the technical and geographical diversity of project work. The container for practices might contain information about the synergies between the individual practices.

Here is the information model now showing the containers for projects and practices.

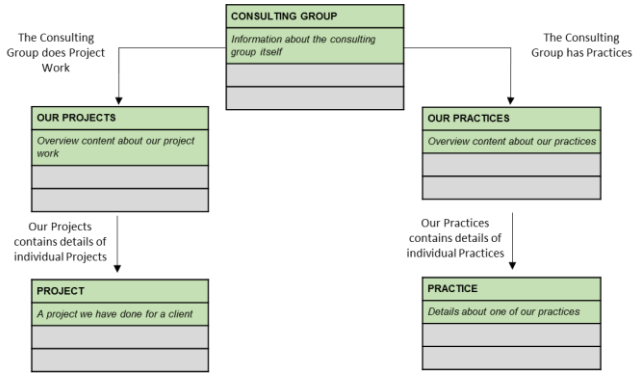


*Figure 8: Information model showing containers*

Container information shows up in the user interface in a number of ways:

- Landing Pages: the container information is often presented as a landing page, for example a landing page for projects or practices
- Page Segments: as sections of another page; for example the consulting group landing page might have sections describing the projects and practices.

**Sketching user interfaces**

These mapping explorations are just that, a way to generate ideas that could fit into your user experience design. This is useful as it stops you jumping to the first idea you come up with. However, as even the simple example here shows, there are many possibilities. Imagine how many more there would be if we had used the more complex model of a consulting group, with Team Members and Testimonials.

Given a set of options, the next step is to select from all the possibilities.

One factor is the quantity of information. Some approaches that work well for small quantities of information do not scale. For example, a project page can list all practices used, as this number is small. A practice page might not be able to list all projects worked on if this number is large, and we might choose to select the most significant ones.

Another crucial factor is our understanding of users' goals, strategies and knowledge. If we have an idea of the user's goals, then we will be able to determine how to best package the information. If we have

an idea of their strategies, we'll be able to ensure that they have a clean user experience with good forward flow.

Often we are building a site for multiple types of user. In this case, it is crucial that users recognize how to meet their own needs when they first enter the system.

We might create a top level sketch like this.

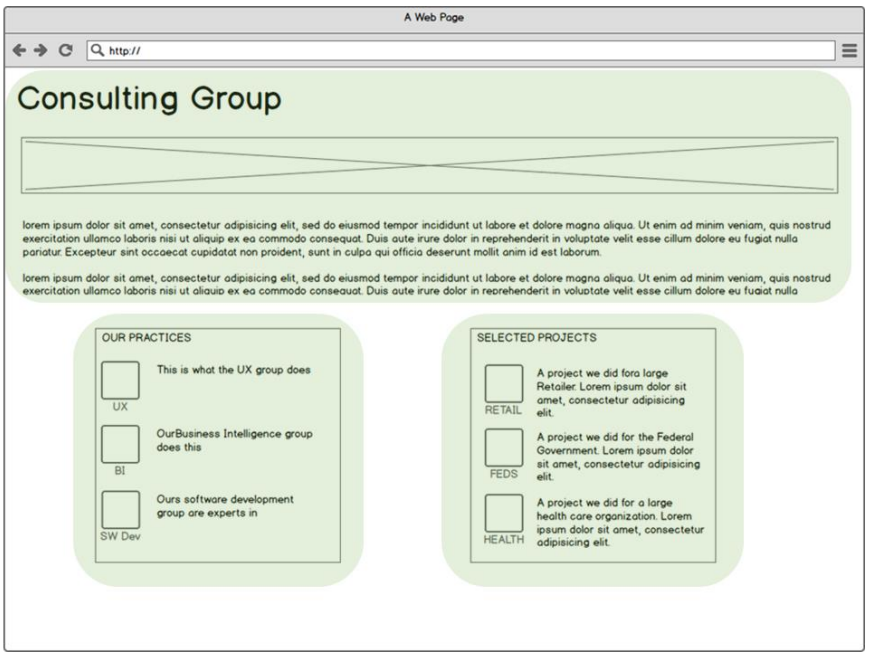


*Figure 9: Top level sketch of the consulting group landing page*

This looks plausible, but we have to validate it against the information model.

Here is the same screenshot, this time labeled to show the attributes needed in the information model.

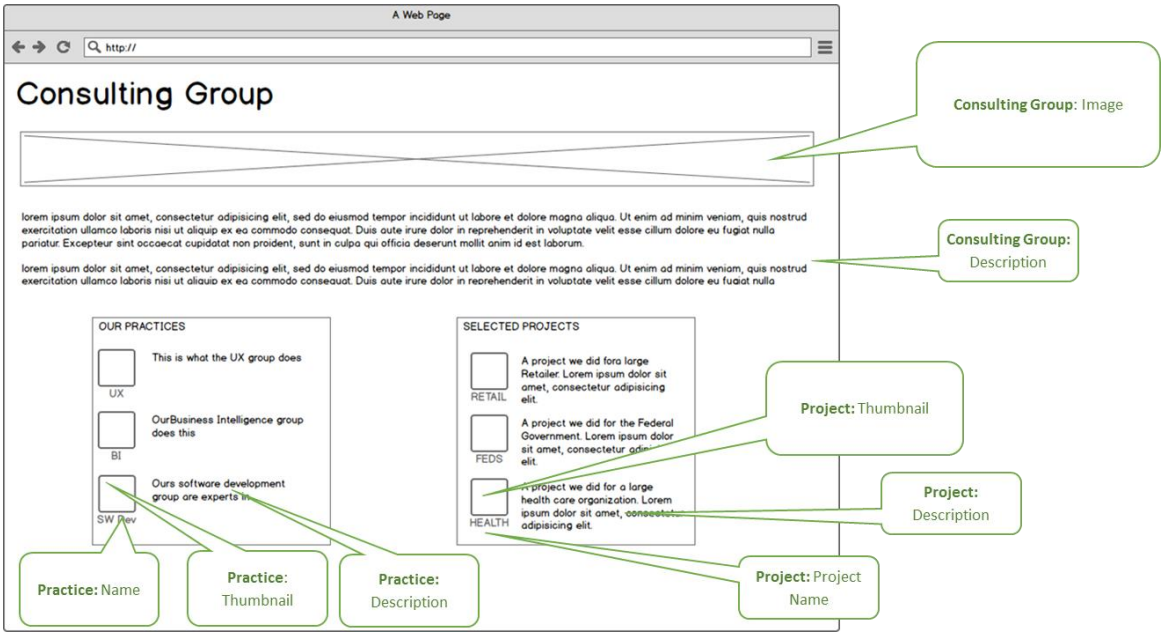


*Figure 10: Consulting group landing page showing source attributes*

At this point, we have validated the solution from an information point of view. We other briefing notes, we show how to ensure that it meets the needs of both the business and the users.

**What's next?**

As part of the "Experiencing + Architecting Information" series, this Briefing Note "Mapping Information to Experience" has many touchpoints to other documents in the series.

- Scoping – shows how to generate informal information scoping diagrams when there is no existing solution
- Information Analysis – shows how to generate information models from user-facing artefacts
- Information Modelling – shows notation and processes for constructing a well-defined information model
- Evaluation – shows how to check that a proposed solution meets the needs of both the business and the users.

Good designing!