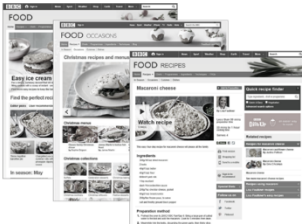




A UNICORN BRIEFING NOTE



Martin Stares
June 2015



THE
INFORMATION
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Experiencing + Architecting Information

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Introduction

The Unicorn Briefing Note series provides intermediate solutions designers with polished and practical insights into designing information rich systems that have a high degree of user acceptance. It draws upon insights from information architecture and user centered design.

This Briefing Note is foundational. It explains that there are two views of information, the user's view and the architect's view, and provides a framework for invoking them appropriately at different points in the solution design process.

Other Briefing Notes in the series drill down in specific competency areas, providing tools and thought processes to take your solutions design to the next level.

This material is not exhaustive but covers what I know well. I sincerely hope this will provide some orientation and help you gain in skill and confidence in our wonderful profession.

Martin Stares
The Information Artichoke

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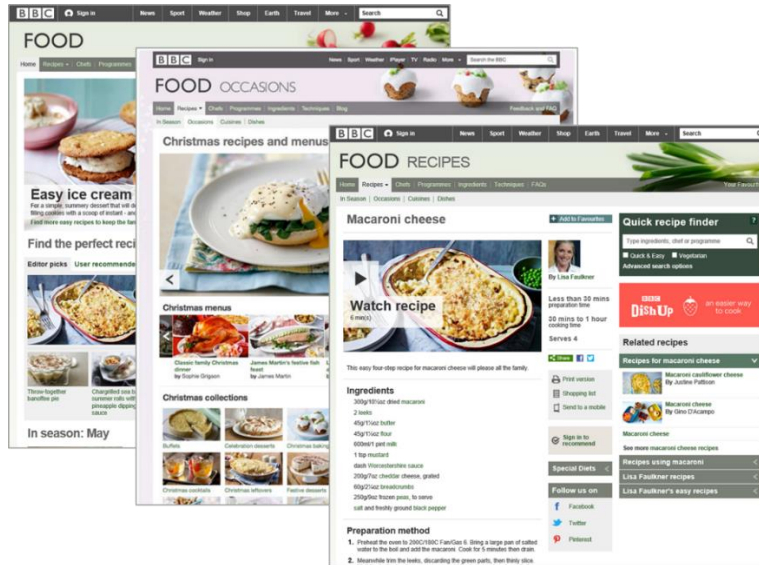


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User's view

The user's view is simply what the user sees when they look at a set of information, whether a web site, a dashboard or a document. Take a look at these pages from BBC Food.



Notice several things:

- It takes time to figure out what's going on, in particular what information the site contains and how it is related
- There is little consistency across sites; looking at Amazon or your banking site is a brand new user experience
- That said, there are many common user interface patterns such as putting global navigation at the top, grouping similar things, to help you find your way around.

As a designer, you need to understand:

- The user view is a limited starting point for innovation and improvement
- It biases you toward incremental changes to the current system (we have all seen PowerPoint critiques of an as-is site, its deficiencies, and superficial remedies).

You will be able to create better user experiences if you also consider the architect's view.

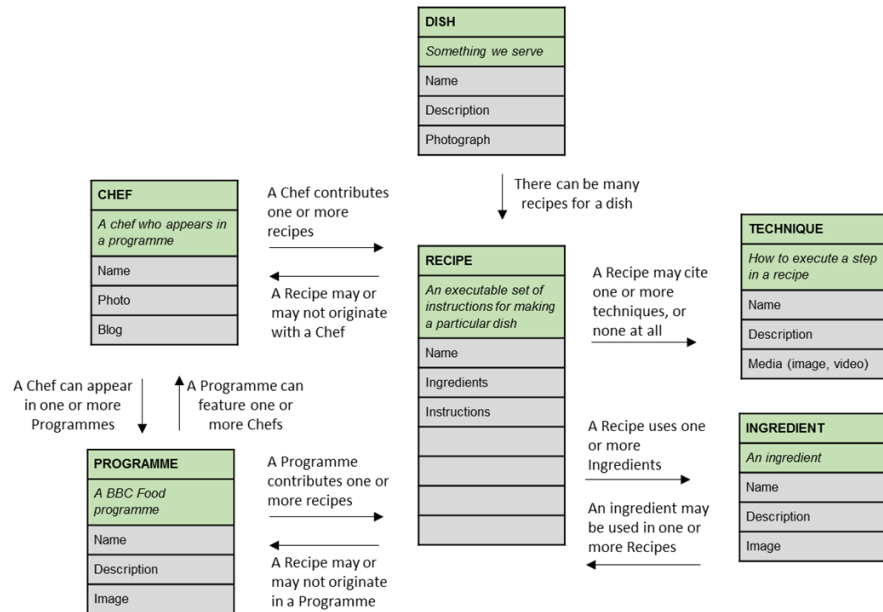


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Architect's view

The architect's view shows you the types of information a solution deals with and how they interrelate. It uses a diagram called an **information model**. For BBC Food, the information model might look like this.



In case this is unfamiliar, let's break it down:

- There are only three things to learn:
 - Components**: what types of information does the site deal with? (Recipes, Chefs)
 - Attributes**: what do we say about each type of information? (Ingredients, Instructions)
 - Relationships**: how are the types of information related? (shown as labelled arrows)
- Unlike the user's view, it is highly abstract. It cares that the site deals with recipes, but does not care whether there are 200 or 2000 recipes or how they are presented visually
- It is a consistent notation applicable to all solutions; the information models for Amazon or your banking site will look very approachable, just a different set of boxes and arrows.

As a designer, you need to know:

- The information model defines your universe; if it isn't in the model, it can't be created, maintained, or used in your solutions
- It is a great starting point for innovation and improvement; improvements will tend to be substantial and meaningful (see Sidebar: Innovating with Information Models).

Information models are a powerful tool; we recommend that you become fluent in creating and using them in a variety of situations.



Sidebar: Innovating with information models

Let's see how information models are a great starting point for substantial and meaningful innovation and improvement.

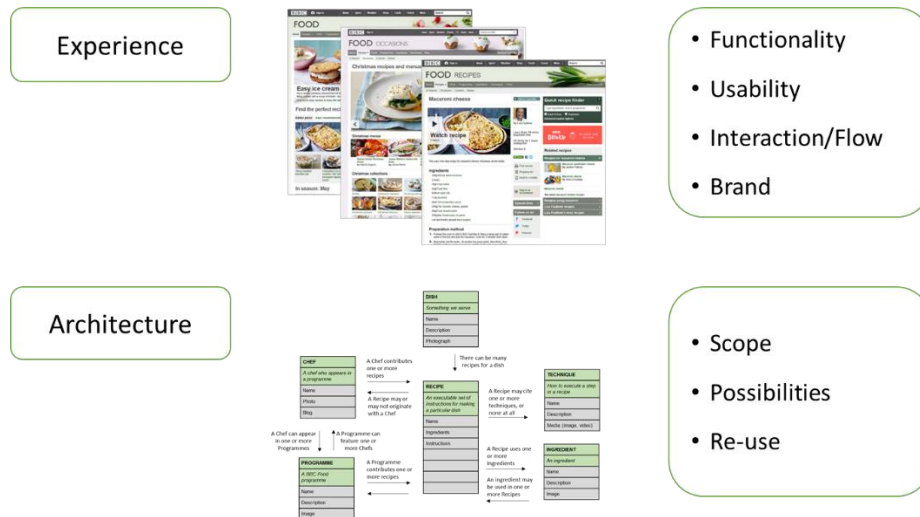
- We can explore other ways to **re-present** information free from the influence of the current solution. If we were building mobile versions of BBC Food, for example, we can ask "How can we present this information on mobile devices?" rather than "How can we shoehorn this site onto mobile devices?"
- We can **re-purpose** the same information beyond its original purpose. For example, by asking "How else we can use the BBC Food information?" we might come up with the idea of creating a structured cooking class or seasonal eBooks.
- We can look for ways to **extend** the information structure and offer new functionality. For example, by looking at the information model for BBC Food, we can ask "Could we allow recipes related to BBC Programmes other than food programmes (e.g. a favourite anchor's favourite comfort food; Doctor Who related recipes)?"
- We can ask questions that relate directly to how users **re-engage** with the information. For example, we can ask "Given the trends toward gamification, could we create food related games such as 'Round the (food) World in Eighty (meal) Days?'".

These possibilities seem to arise magically, but actually arise through playing with the information model. Mentally generalizing the definition of components, adding attributes, or changing the relationship structure serve as a thought-experiment to stimulate ideas. Of course, a bit of experience and imagination help too!



Complementary design domains

The user view and the architect view show that, as solution designers, you can draw upon both **experience** and **architecture** design domains.



Many people are much more skilled in the experience domain. But getting proficient in both areas is good news for a number of reasons.

- First is a matter of confidence. Anyone can create a site with 5 - 50 pages. But when you have to create a site with 500 or 5000 pages, new principles and approaches are needed
- Second is a matter of focus. There are tools for thinking about the overall shape of the solution, tools for thinking about navigation, and more; you can choose the appropriate tools at different stages in the design process.

As a designer, you need to understand some relationships between experience and architecture:

- Experience and architecture are not worlds apart; they both aim to meet user's needs
- User goals, strategies and knowledge shape both the experience design and the architecture.
- Every user solution has a corresponding information model
- For a given information model, you can design multiple user experiences.

Architecture and experience are both important, but come to prominence at different stages of the design process.

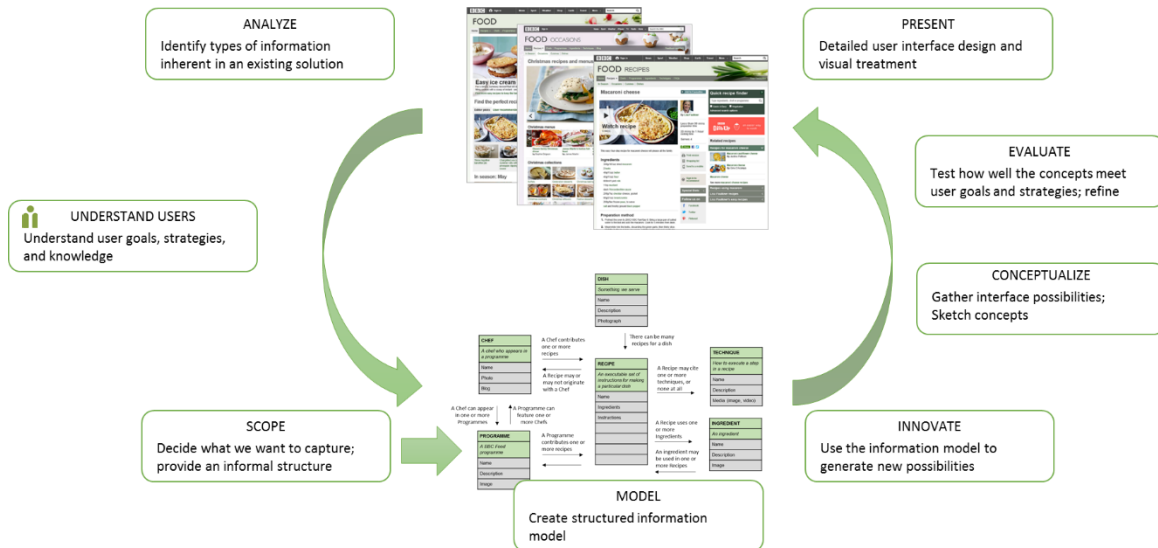


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The framework

This diagram shows the places where experience and architecture can contribute when designing information rich systems.



It's not a methodology or project process, but rather a set of activities you can utilize as needed. The goal is to encourage thoughtful consideration and communication at every stage, using a variety of tools and approaches.

Understanding users

This activity provides context for all other. It should always take place if you want your solutions to have a high degree of user acceptance. In it, you take a structured look at users: what are their goals, what are their strategies for reaching their goals, and what do they already know.

The answers to these questions shape both the architecture and the user interface.

You may find that there are users with distinct mixes of goals, strategies and knowledge (often documented as personas), and that you may create corresponding variants in the delivered solution.

Analyzing



This identifies the distinct types of information present in an existing solution. You will need this when doing an intranet makeover, or moving a web site to a content management system, or moving a set of documents from file folders to a document management system.

There are some powerful information analysis techniques for doing this, such as looking for different sources of information, or different information life cycles. You can see a set of these in infographic form at <http://theinformationartichoke.com/infographics-for-information-analysis/>.

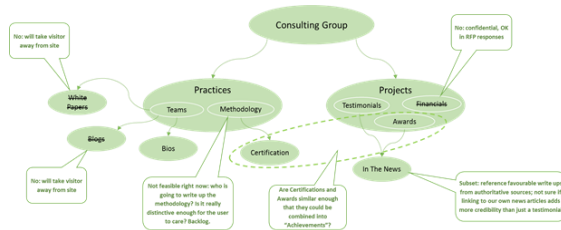


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Scoping

This is a semi-formal exploration of information needed to support as new initiative.

By semi-formal, we mean something more structured than a list but not as rigorous as an information model.



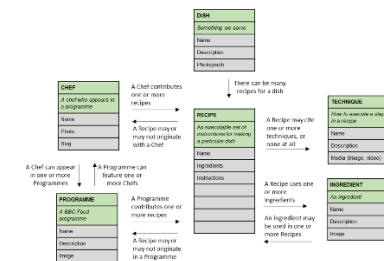
Among other things, you need to consider granularity, deciding whether the solution needs information in big chunks or whether there are subsets that are independently useful.

It helps to explore the larger information ecosystem for information resources that can be mashed up with internally created information.

You will change the approach to scoping based on the nature of business and user goals – scoping for an information pure play is different than scoping for a process intensive solution.

Modelling

This is the core activity in our approach. It should be unconditional. The notation is quite straightforward, but like good content, information models are easier to read than to write.



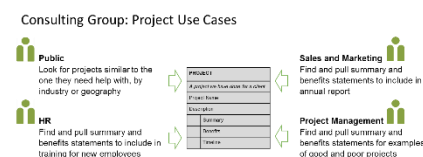
Modelling is an iterative process. The model gets refined as you think in more detail about user goals, presentation options, and best practices for logical information structure.

Typically you will see attributes added or removed, one component giving rise to a sub-component, or components combining into a more general component.

Also, seeing a number of worked examples will be a quick way to learn common patterns.

Solutioning /Innovating

This activity uses the information model to generate ideas on how the information can be used.



One key area is how people can access this information. You can systematically explore the information model looking for (and rationalizing) access methods. Often this indicates metadata that needs to be added to the information model.

Related to this is looking for aggregating and curation possibilities.

Finally, with an information model in hand, you can mentally generalize the definition of components, add attributes, or change the relationship structure as a thought-experiment to stimulate innovation.



Conceptualizing

This involves sketching user interface concepts. There are many user interfaces possible for a given information model; the one(s) you choose depend on user characteristics and also the volume of information.

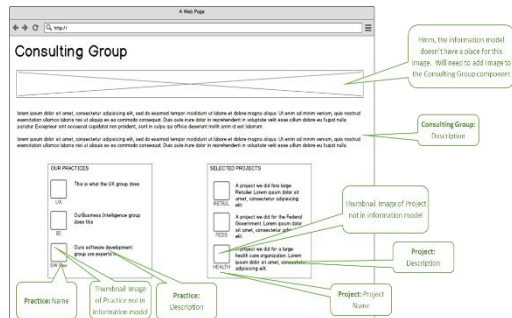
Aspect of Information Model	User Interface Possibilities
The components involved	<ul style="list-style-type: none">Menu items: Project and Practice are high level, may be part of global navigationSearch scopes: search entire site or just Projects, Practices
<div><div>CONSULTING GROUP</div><div>Information about the consulting group itself</div></div> <div><div>PROJECT</div><div>A project we have done for a client</div></div> <div><div>PRACTICE</div><div>One of our internal practices</div></div>	

The experience and architecture worlds seem far apart, but in fact the various aspects of the information model have one or more counterparts in the user interface.

By being aware of these, you can reproducibly assemble a rich set of user interface ideas rather than running with the first one that comes to mind.

With these interface ideas in mind, you can start to sketch solution concepts. We use wireframes to show the information we choose to display and how it is packaged across different screens.

At this stage, our wireframes focus just on these information aspects. It may be that a user experience designer changes our interface layout, even in big way, and that's fine.



These wireframes also ignore branding and content. Later iterations of wireframes will certainly put more thought into user interface, content, and brand compliance.

Evaluating

This involves evaluating the wireframes against our understanding of the user.

Strategy <ul style="list-style-type: none">Look for projectsLook for (more) Government projectsKeep looking through Government projects until<ul style="list-style-type: none">convinced yet that group can help us with our projectconvinced that they cannotno more information available
Scenario <ul style="list-style-type: none">User can't find another Government project and leaves the site FailAs it happens, there are many more Government projects, just not included in the subset "Selected Projects" Fail

By now, you should know three things about users: their goals, their strategies for reaching their goals, and what they already know. There are evaluation sub-activities corresponding to each of these.

- Goals: are we providing the user with the right information
- Strategies: is there a flow or path through the solution that corresponds to the user's goal seeking strategy
- Knowledge: does the user understand how to use the solution to meet their goals; are we speaking their language

These are ideally done with a "real" user. Any failures that you identify will feed into a revision cycle. This may involve changes to the interface wireframes, the information model, the scope, or even the initial goal statement.



Presenting (not covered in this material)

This involves designing the final user interface and experience. It transforms the conceptual wireframes into final design flats or equivalent. This involves such things as:

- Following best interface design practices regarding placement of UI elements, choice of interaction controls
- Visual treatment
- Following corporate standards regarding branding and tone
- Incorporating content and media.

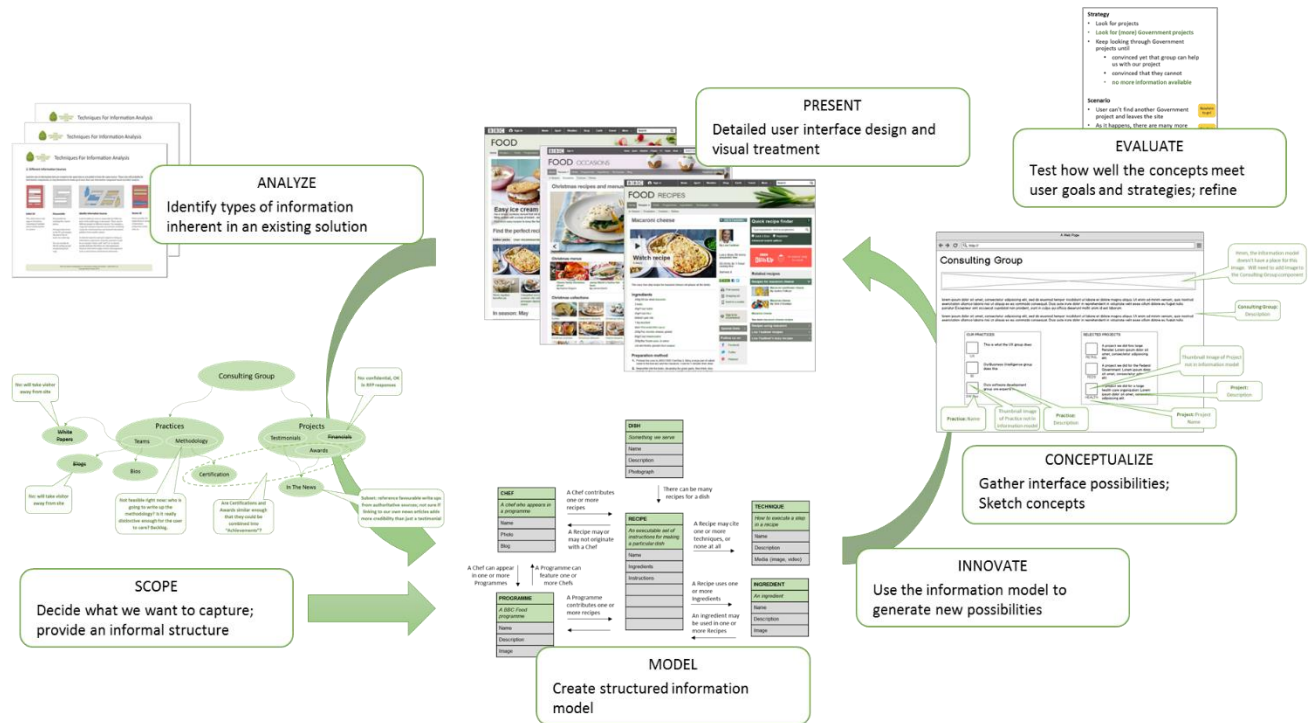
These areas are not covered in this iteration of the Unicorn Field Guides.



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At a glance

This infographic summarizes the tools and activities described in this Briefing Note to help you approach Unicorn status in designing information rich systems.



Other Briefing Notes in the series drill down in specific competency areas, providing tools and thought processes to take your solutions design to the next level.

For more information, check out our training materials at www.theinformationartichoke.com, or email us at theinformationartichoke@gmail.com.