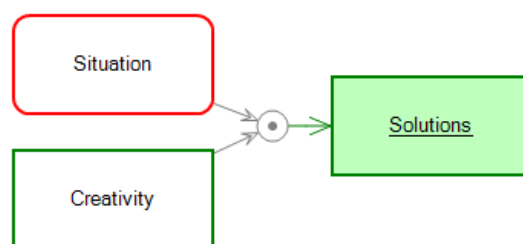# How to building templates, creativity tools and best practice models using Southbeach Modeller

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Contents

Introduction

When someone in your team says "We should do X", what do you do? You begin to ask questions. If X is a product idea we you ask questions about the market for the product. If X is a project proposal you ask questions about objectives, cost and resources. Questions are what drive our creativity, our innovation and the problem solving process. The best consultants know all the right questions to ask. They may not have written them down, but they always seem to have them to hand. Wouldn't it be nice to be able to recall all of the important questions we need to ask in any given situation? This paper explains how.

The business literature is littered with books that purport to ask the right questions. Some of these books lay out the questions very clearly. In others the questions are buried deeper in the text. The best business and engineering books explain the context in which each question should be asked.

Of course, books are not the only source of good questions. All over the world, creative and analytical people, working in many fields, collect questions that they find useful in their work. As these questions are honed and applied in many projects they cluster together to form a best practice, a tool or a method.
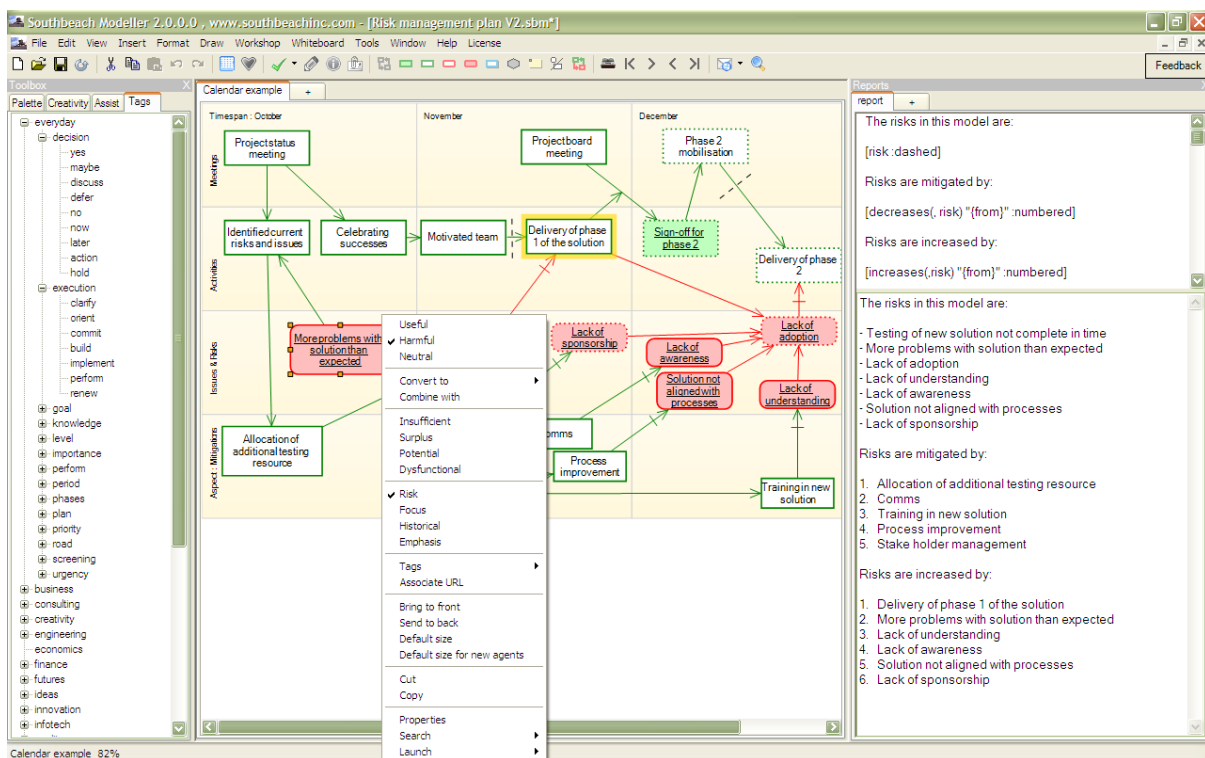

Figure 1 - A project calendar template showing a simple report on risks.

Framing problems as questions is what all creative people do to bolster their ability to move forward. The SCAMPER technique, for example, is a set of questions that you can use in almost any problem situation. An even simpler method is to ask the question "Why" until you get to the core of the problem.

The creativity literature is littered with lists of questions. Some authors have made whole careers of

asking questions. In the book "101 Creative Problem Solving Techniques", by James Higgins, almost all of the methods described boil down to a set of questions. In the book "Questions that work" by Andrew Finlayson, the author attempts to show us how to ask questions that will help you succeed in any business situation. Both books are well organized lists of questions.

Edward De Bono, creator of the 'Six Thinking Hats' method, also taught us a lot about the types of important questions to ask. He used six colours to highlight the differences between those questions that focus on facts (white hat), on feelings (red hat), on critical judgement (black hat), on positive views (yellow hat), on new ideas (green hat) and on the big picture (blue hat).
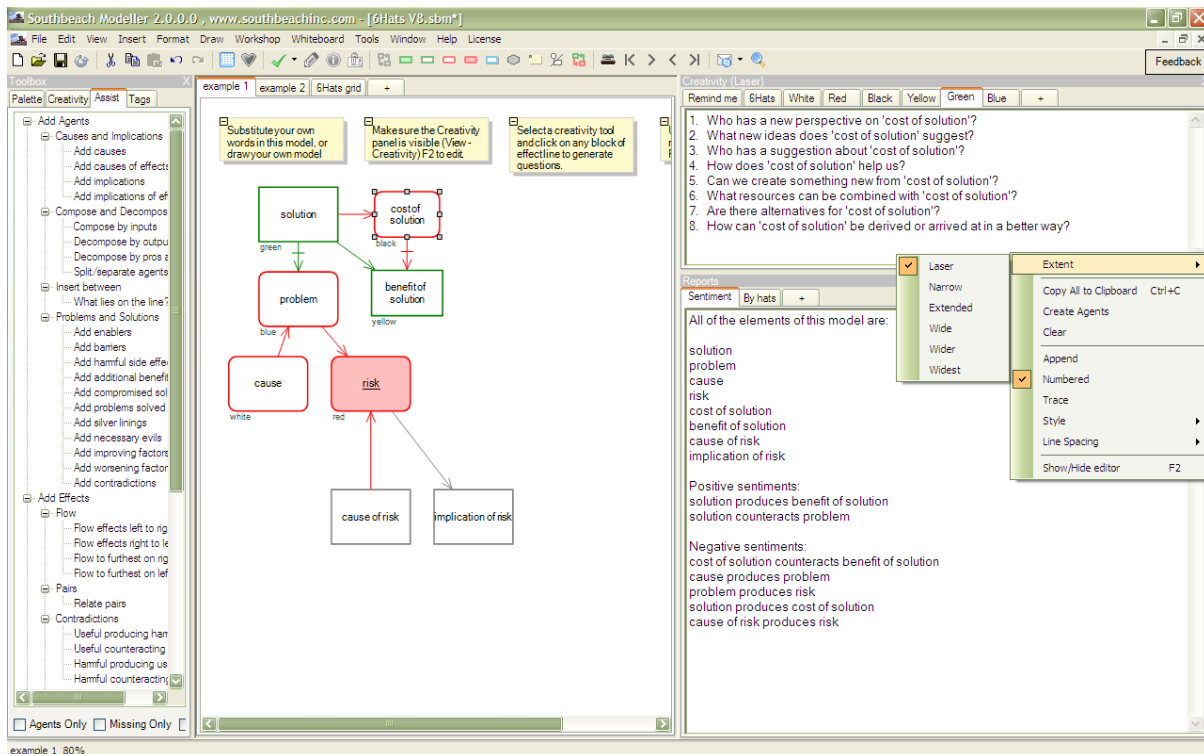

Figure 2 - A Southbeach template for running a 'Six Thinking Hats' workshop. The situation can be modelled, and as we click around the model, the appropriate questions are generated. A simple report is included which summarises the positive and negative sentiments.

Questions also lie at the heart of many engineering and business methodologies. Root cause analysis is a well known questioning method. An engineer skilled in risk analysis will use questions to identify causes, and consequences. A consultant when using a 2x2 chart is asking questions about the relationship between items placed in different quadrants.

Questions are also used in books that give advice on business strategy. For example, in "Business Model Generation" by Osterwalder and Pigneur, the authors have synthesized the useful questions we should ask when designing a new business model.

TRIZ is perhaps the pinnacle of problem solving and innovation methodology. Even it is based around questions. TRIZ uses patterns of contradictions to pinpoint the right questions to ask. For example, if something useful in the system is providing useful output, but also a harmful side effect, a relevant question could be:

'Can I find a way to obtain the output, without the side effect?'

TRIZ links questions like this to characteristics of the specific situation. For example, if the contradiction is between 'speed', and 'weight', the question may relate to 'mechanical substitution'. Asking a generic question about 'mechanical substitution' in the context of a specific problem situation, can lead to creative suggestions for a solution to the original problem.

All of the examples above, and many more, can be encoded as templates for use with Southbeach Modeller. Southbeach is an effective way to build a library of reusable best practices.

Southbeach Modeller

Southbeach Modeller is a unique software tool for modelling problems and goals, and linking these to questions or suggestions that can stimulate creativity, problem solving and innovation. It is an ideal consulting workbench.

Some consultants are using Southbeach to build a library of best practices, and then share these with their colleagues when engaged on a project with a client. This fosters a consistent approach to client work. It also teaches powerful methods to others.
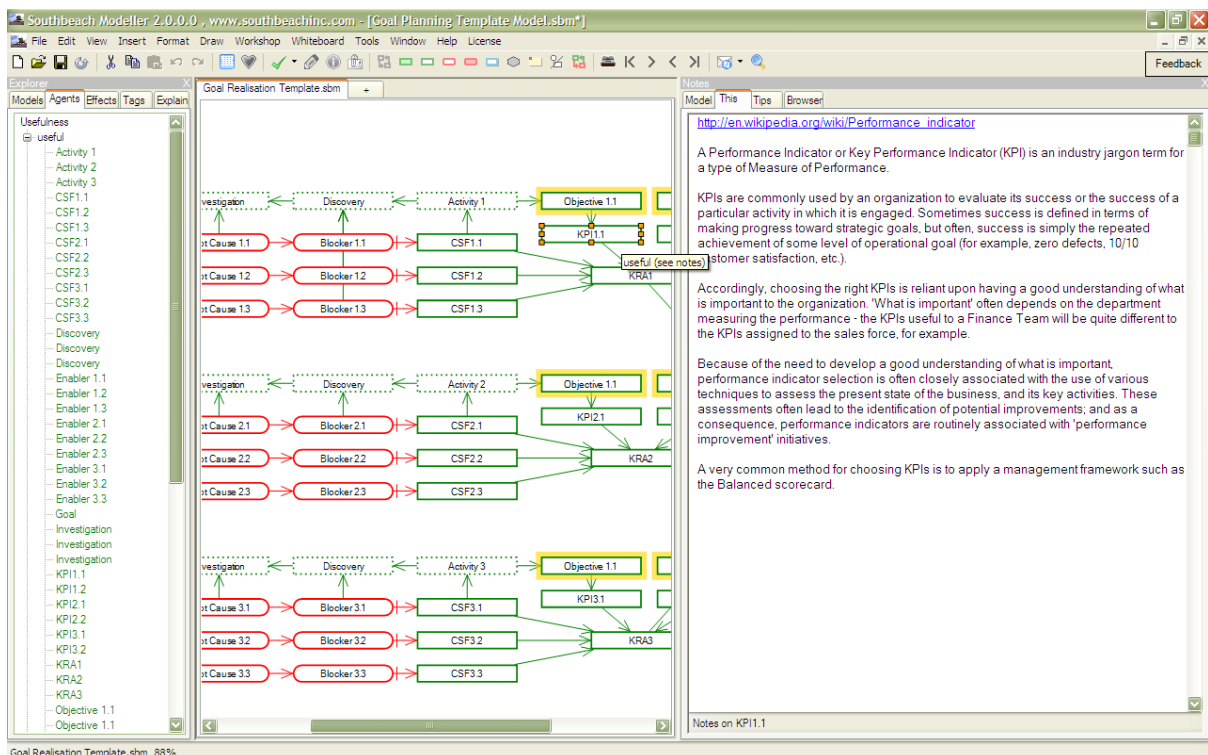

Figure 3 - A goal planning template. The model can be used to develop a concrete model of a set of goals. The user clicks on blocks in the abstract model to understand the terms used.

The Modeller software is very general purpose (and easy to use). It can be applied across a wide range of business, engineering and scientific fields and disciplines. Whether you try to capture your own creativity, or leverage resources you find in books, using Southbeach should help you to be a more effective consultant, in any field.

Each section of this paper will demonstrate, step by step, how to build a Southbeach model that captures an entire best practice as a template you can take into a project with a client.

Southbeach Notation

A basic Southbeach model is a set of 'box and line' diagrams that clearly describe the situation and the goal, together with notes that explain details of the situation in areas where text is sufficient and a model is unnecessary.
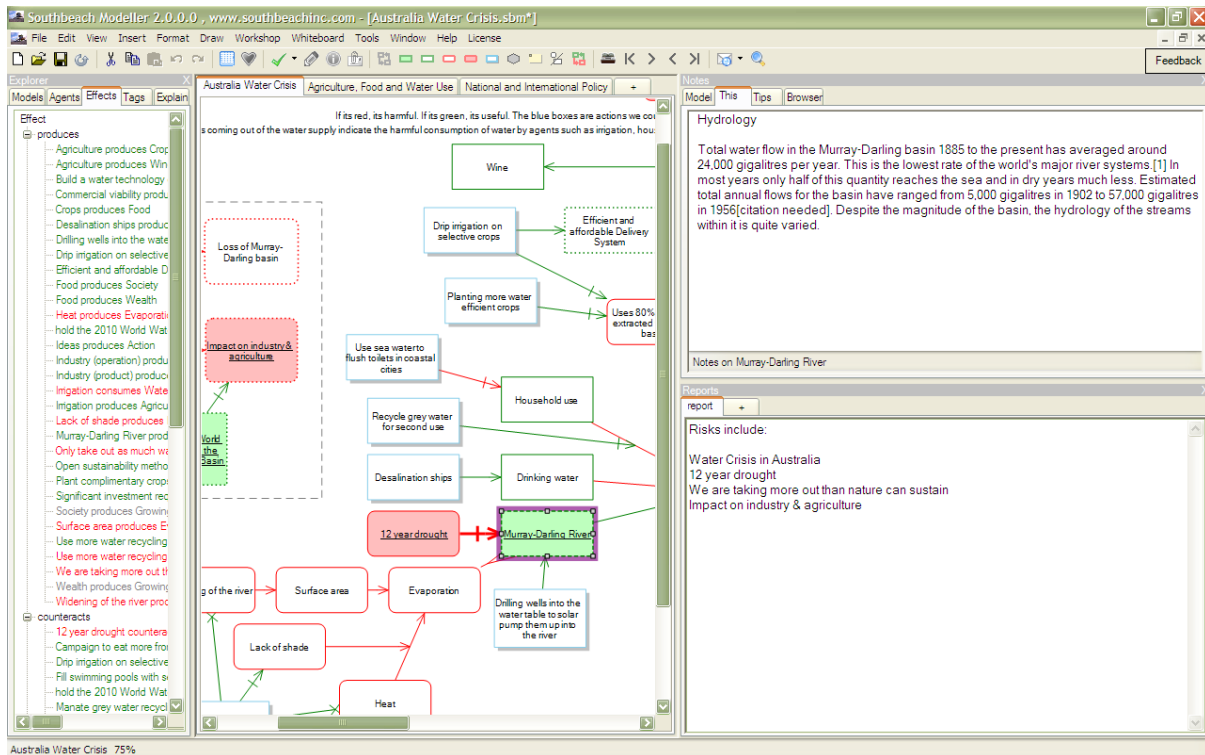

Figure 4 - A Southbeach model of the water challenge in Australia. A block in the model has been highlighted. Background information is displayed. A simple report lists the risks in the model.

In Southbeach, each model, and the elements within it, is a reusable building block for another model. Just 'drill down' and drag them to the canvas. Every Southbeach model is a resource for building a new model. Every model is therefore a potential template.

In the example below, the user has selected a model of a situation that they have experienced in the past, and they are using this as the starting point for a new model.
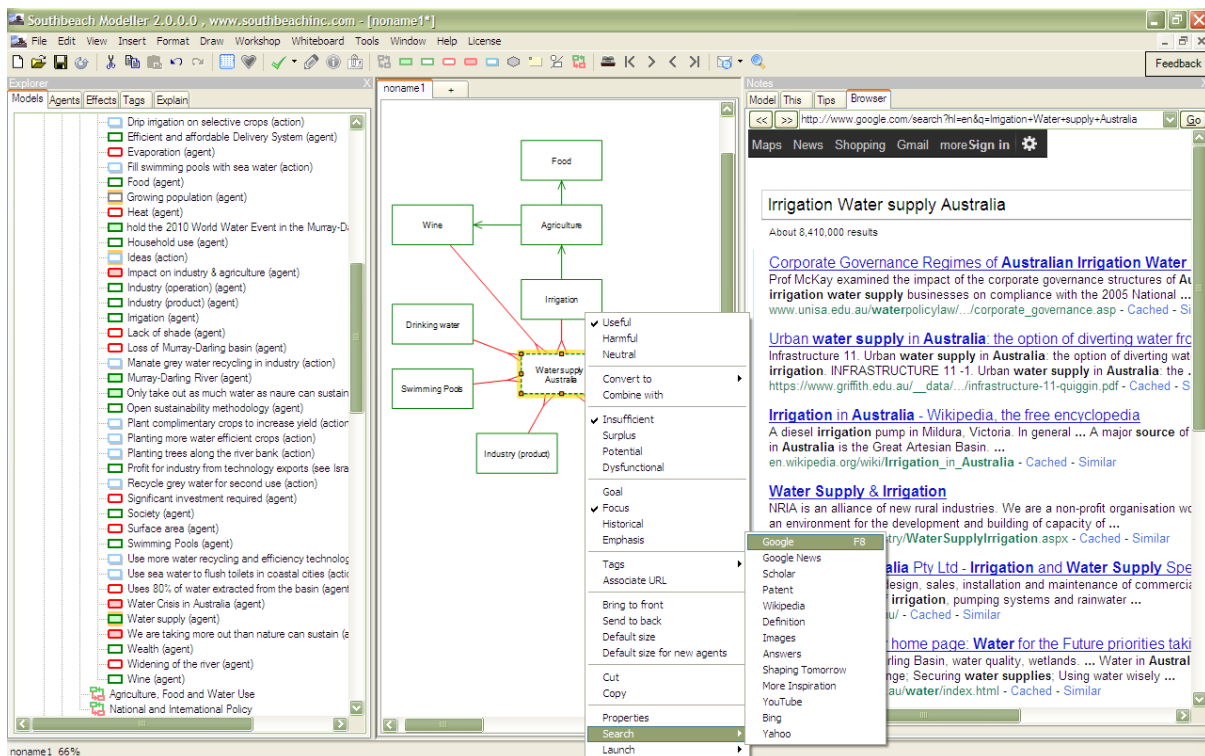
Figure 5 - Here, the user has 'drilled down' into an existing model, drawing on its parts, for building a new model. The browser on the right is showing the effect of a search on a block in the model.

As you develop your skills with Southbeach, you will find it becomes easier and easier to develop generic models, and to apply them in the specific situation you face. If you manage your knowledge carefully, your productivity will increase.

Hint - Use the right mouse menu on the canvas to set defaults for many aspects of the interface, specific to the model you are developing. For example, if you like the different types of blocks to be different sizes, or if you wish to always model with certain effect lines, set them as defaults. The defaults are stored in the model, and therefore also form a part of the template.

Multiple models - one file

Southbeach models are conveniently stored in .sbm files. Each file can contain several models. They are shown using tabs, similar to 'sheets' in spreadsheet software. Here, a model has been set up with pre-defined tabs for each phase of an assignment.

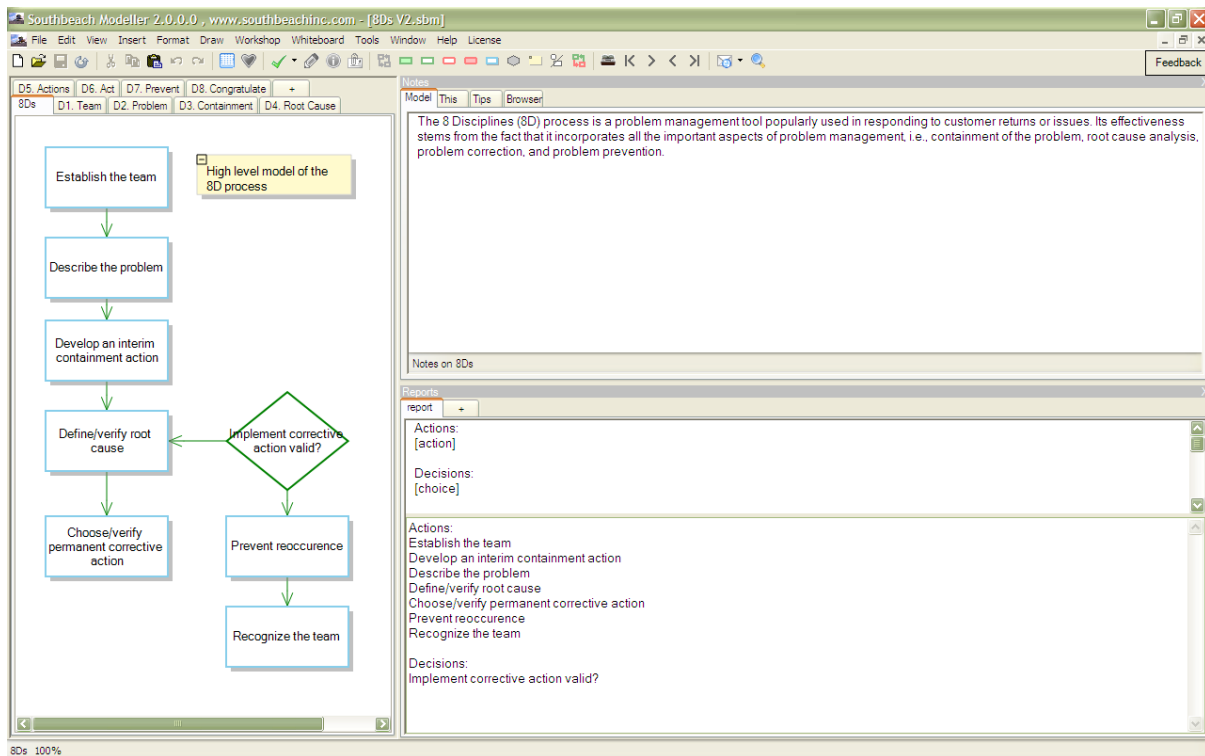The number of tabs is not limited, other than by the available screen space.

Figure 6 - A single .sbm (Southbeach) file containing nine models (tabs) for the overview and phases of the '8Ds' method. Such a file can be used to guide, and capture, root cause analyses during an 8Ds 'intervention project'.

Model and element Notes

Every model, in every file, and every element (boxes and lines) in every model, can have associated text notes. Those who are familiar with concept mapping tools will understand how powerful this is. By clicking around the model the notes are displayed in a panel on the right. It's a simple way to link and manage knowledge

In the next example, notes are being used to describe a scenario in a training exercise for the 8Ds 'Root Cause' phase. The model also contains creativity questions for the 5Whys+ method, a simple way to validate assumptions.

By developing such visual models, accompanied with notes and your creativity (questions), you can quickly and easily distribute a 'best practice' model to your team.
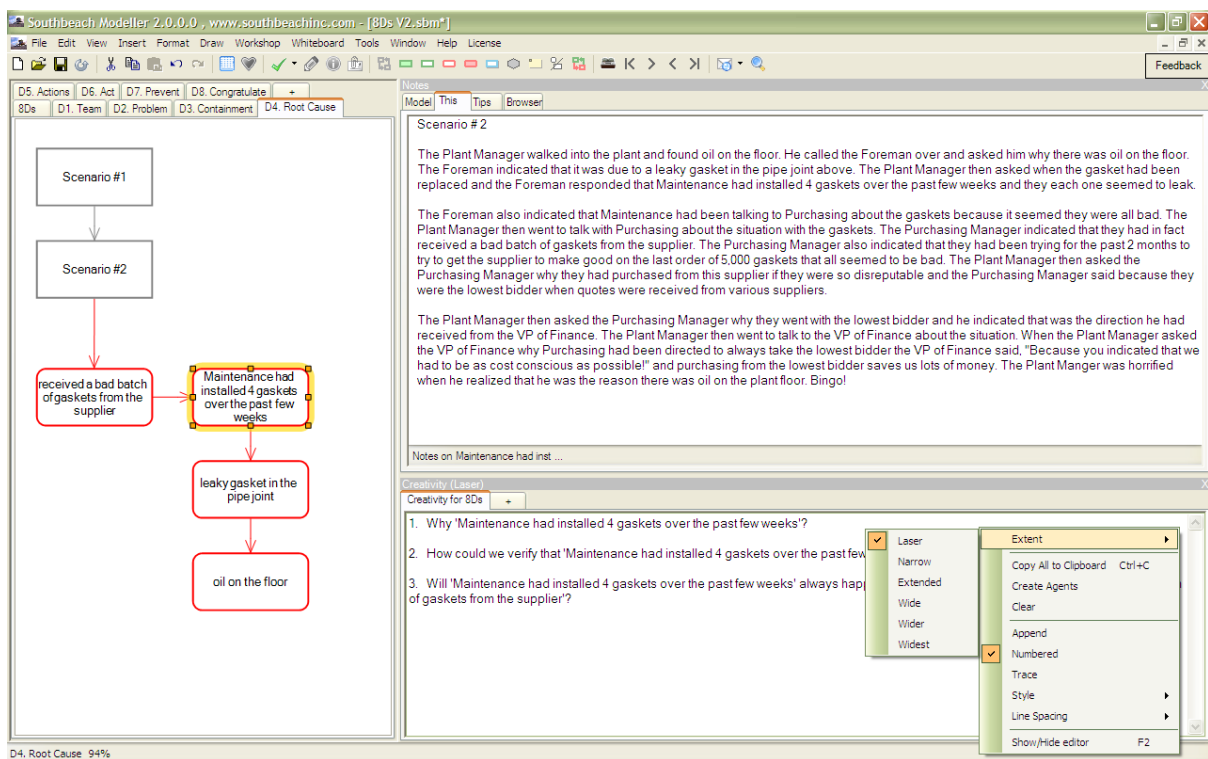

Figure 7 - This illustrates another part of the 8D template shown in Figure 6.
The root cause tab (D4) is active.

The user has clicked on a block in the diagram. The 'This' tab explains the scenario and has generated three questions. These rules are embedded in the model. Text from the diagram has been inserted into the sentences generated. This makes them read easily. The output only applies to the block clicked on, because 'Creativity' has been set to 'Laser'. If the extent was wider, more questions for more parts of the diagram would have been generated.

Using "tags"

A relatively new feature in Modeller, tags are important to any advanced use of Southbeach.

In the Toolbox [Figure 8] there is a 'Tags' tab. It provides a set of pre-defined taxonomies that you can use in the course of developing a model. There are tag groups for different aspects of business and engineering practice. There are tags for business prioritization, tags for engineering process maturity, etc.

The tags are not hard-coded in the Southbeach software. You can edit all the tags and build up your own taxonomies as required. For example, a chemical engineer will no doubt delete all of the management consulting tags and replace them with tags relevant for chemical applications.
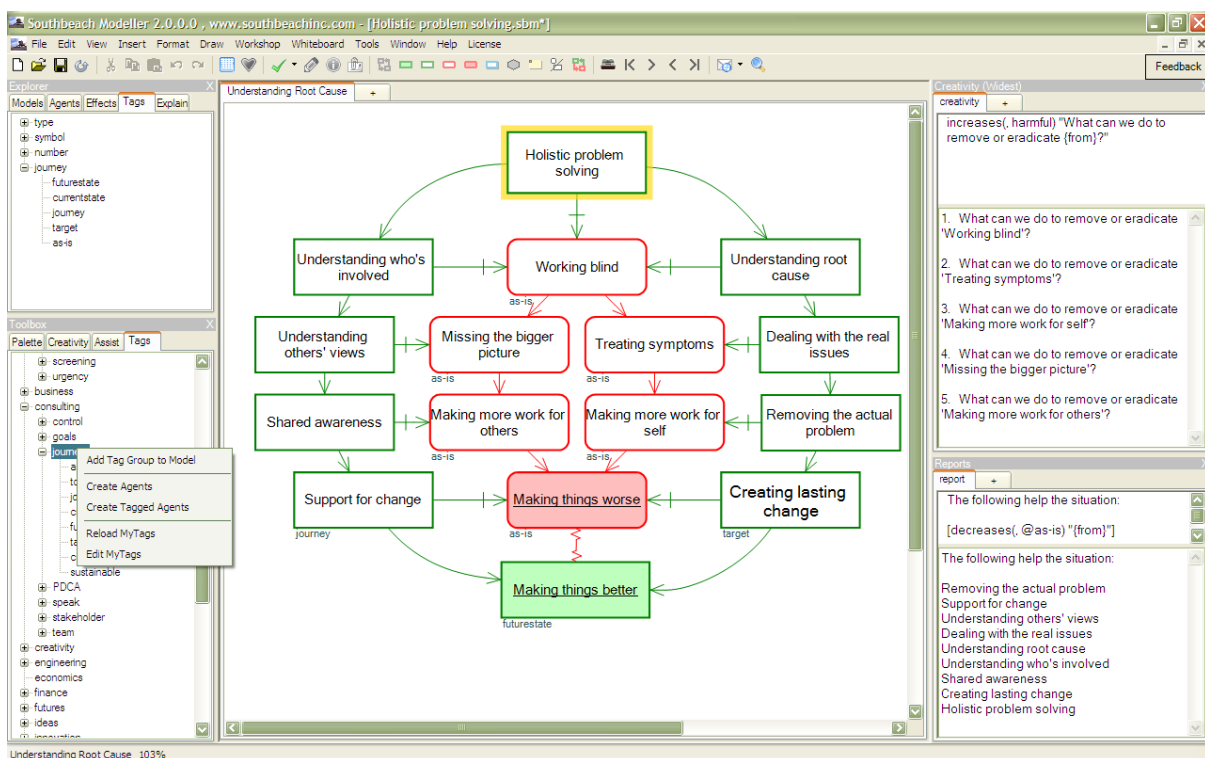

Figure 8 - The 'tags' tab in the 'toolbox' panel provides a library of tags organized as a tree. You can extend this as required. Tag groups that you create are copied to a model, and then used to tag elements as required. Blocks in the model can have any number of tags. In the example, a simple report is listing those elements 'decreasing' elements tagged 'as-is'.

Tip - tags can be defined to be mutually exclusive (e.g. a type of animal), or additive (e.g. characteristics of the animal).

In addition to tagging blocks, you can also use tag groups to create an instant set of building blocks. In the next example, the tag group 'business execution' is used as the starting point for the development of a new model:
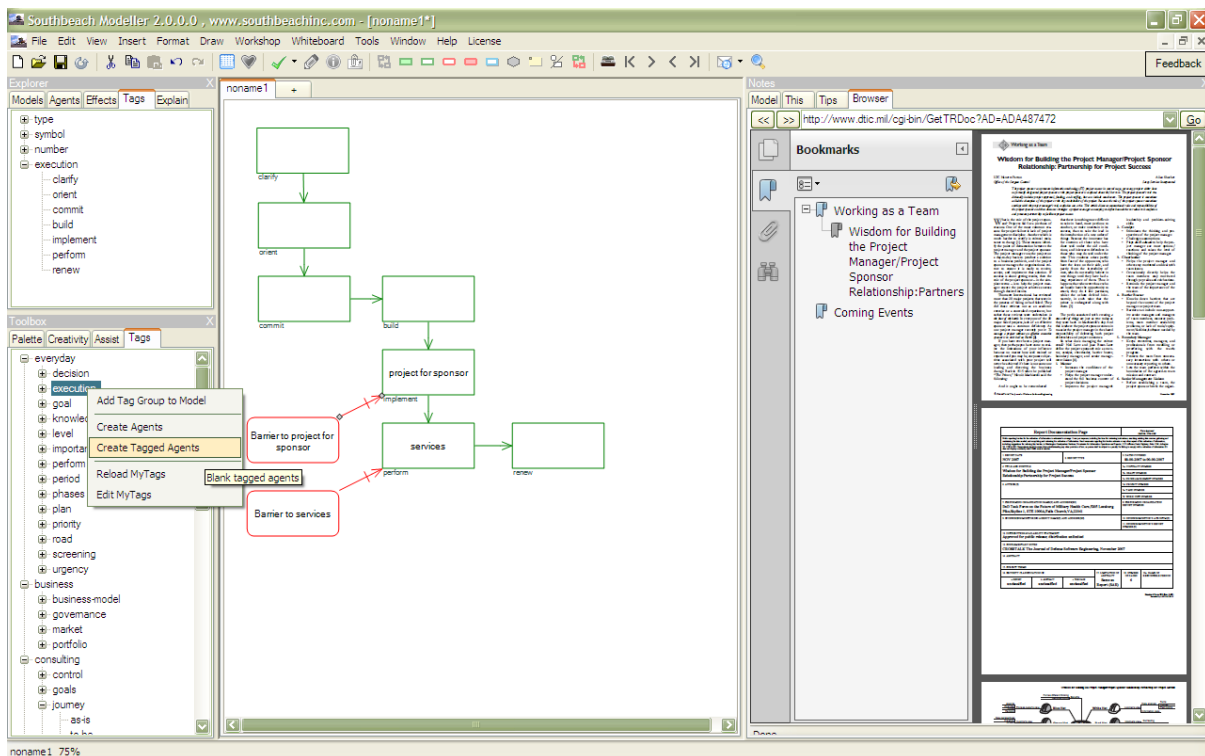
Copyright © 2011 Howard Smith

Figure 9 - From the tag library, the user has selected "Create tagged agents". The blocks are then used to build a model. On the right, the user is referring to a related web resource.

As tags are added to the model, individually, or as a group, the tags appear in the Explorer panel [top left in Figure 9]. Once tags are 'in the model' they are available at any time for tagging and un-tagging other elements. (Hint - click right mouse on a block) If you then send the model to a colleague, they will also have the tags.

Tags allow the user to extend the meaning (semantics) of the model. A red block in a Southbeach diagram says that the element is 'harmful' (from some agreed perspective). A dashed line means that the element is 'insufficient'. If such an element is also tagged 'power', we know something more about the situation.

Over time, your tag library will be shaped by the type of work you do with Southbeach. In a later section we will show how to use tags to generate, or alter, the interactive output from the model, based on your own creativity rules.

Hint - in creativity rules the built in semantics are denoted by keywords such as 'useful', 'insufficient', 'risk', 'focus', etc. These correspond to visual aspects of the notation, i.e. 'green', 'dashed', 'filled red' and 'yellow highlight' respectively. To refer to any user supplied data, such as the name of a block, a label on an effect line, grid position or tag value, use the syntax: @value.

Build a Sequence

It is often helpful, when presenting a model to a client or in a team workshop, to 'build up' the model in stages, section by section. Southbeach Modeller makes this very easy.

There are icons in the application bar which are always available, for example, to turn on/off the harmful blocks (problems), or the useful blocks (enablers). Consultants use this feature, for example, to turn on/off the action blocks (blue), which represent are often used to represent the consultant's recommendations. Such features work with any model at any time. It is also possible to build a pre-defined display sequence into the model, and to store it with the model or template model. A sequence can help those who are trying to understand the model.

Click on the 'Build a sequence' panel and decide which blocks, or groups of blocks, should be displayed, and in which order.
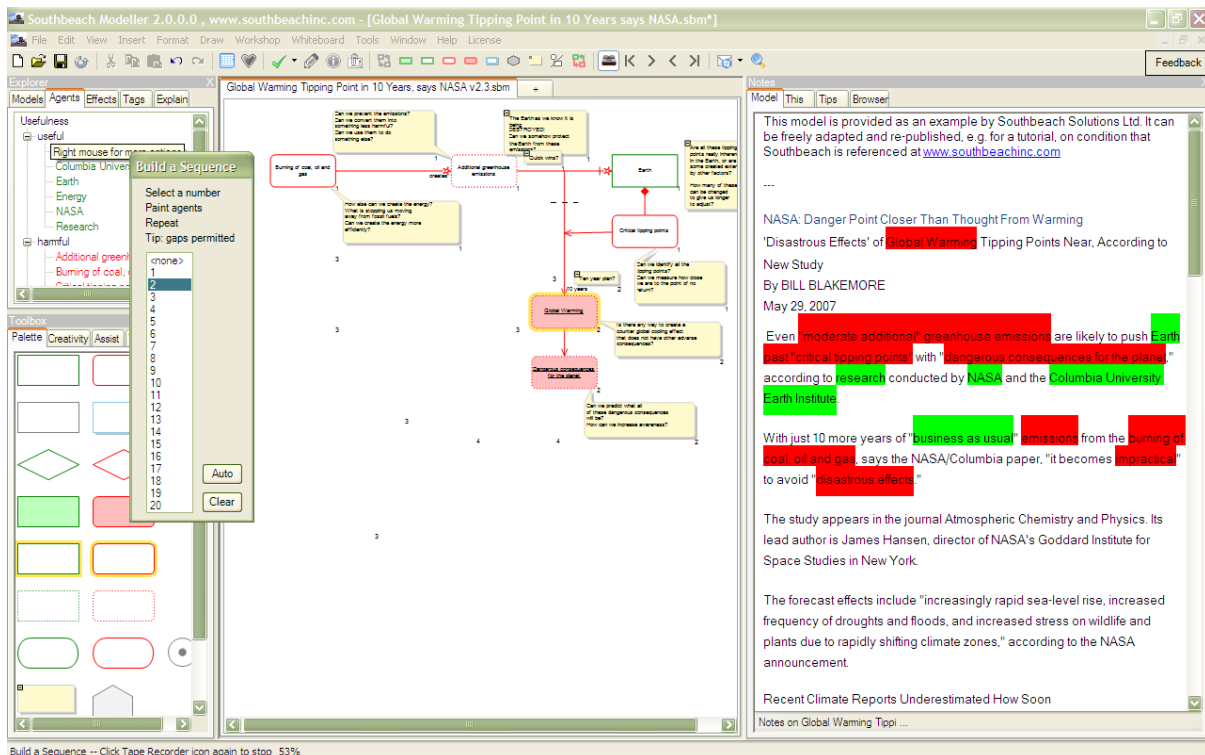

Figure 10 - On the left, the 'Build a sequence' dialog is displayed. Each block can be painted with a number to set the display order. 'Tape Recorder' controls in the application bar allow the model to be built up, block by block or in groups. There are also icons for showing/hiding different types of blocks without the need to build a sequence, e.g. show/hide all actions (blue boxes).

Pause for breath

Drawing models, associating text notes, adding tags and building a sequence are simple and effective ways to develop templates for kick-starting a new assignment or for distributing to team members to guide their work. However, there is a lot more to Southbeach than this. The next part is a little harder to learn, but worth the effect. Previous sections have hinted at MyCreativity and MyReports. We will now describe them in more detail.

MyCreativity Rules

We started this paper by talking about the power of questions. Now we shall explain how to add interactive questions (and more) to your models. Suppose you wanted to output the questions:

> Why does X happen?
> When does X happen?
> What is the cause of X?
> What will the impact of X be?

... when you click on a block in the model. Of course, you would want the X to be replaced by the text of the block you clicked on. To achieve this, add the following to a 'creativity' tab in the model. The rules you need are:

> * "Why does {this} happen?"
> * "When does {this} happen?"
> * "What is the cause of {this}?"
> * "What will the impact of {this} be?"

The asterisk (*) signifies that you want the output to be generated if you click on <u>any</u> block. The {this} is a macro. It will be replaced by the name of the block you click on. The advantage, of even this simple creativity approach, is that the questions read more clearly, and generate more ideas. Click around a model and you'll see what we mean.
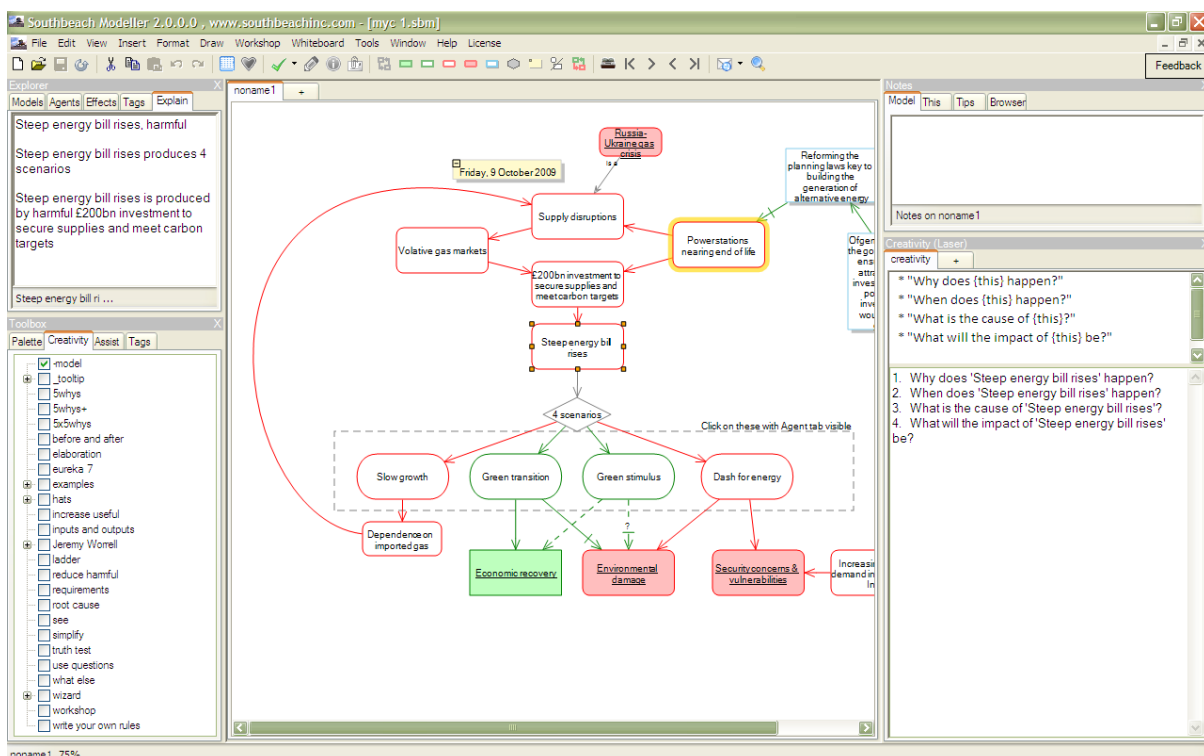

Figure 11 - Four simple questions generated from four simple MyCreativity rules.
The user has clicked on the block 'Steep energy bill rises'

We'll get into more advanced question forms shortly, but before we do, let's mention 'extent'. When

you click in the model, on a block or on an effect line, you select one object. But Modeller can radiate out from this position, and apply the rules you have defined to all the blocks and effects within a certain boundary called 'extent'. There are six extents supported:

> Laser - just the block or effect you clicked on
> Narrow - jump to next effect or block
> Extended - and again
> Wide - and again
> Wider - and again
> Widest - all connected elements of the model

Here, the user has changed the 'extent' to 'wide' and therefore more questions are being generated from a single click within the diagram. If you have a well designed set of rules, and you apply them to the whole model, an entire script can be generated. Consultants use this to insert into reports provided to their clients. This demonstrates that they have 'explored all angles' or 'been very thorough' in their work.
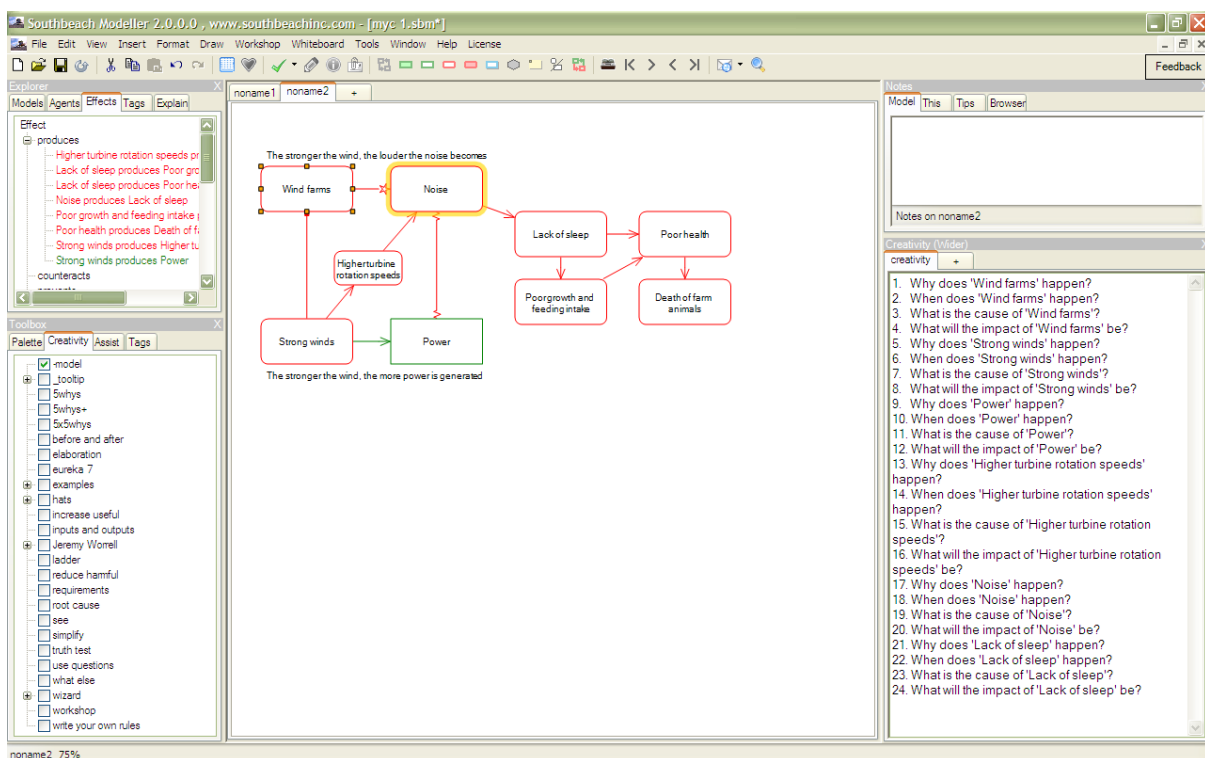

Figure 12 - The user has selected extent 'wider'. By clicking on a single block in the model, the questions are applied to each of the blocks within that extent. In this case, 24 questions are generated.

You will have spotted that the output shown in the example above is rather repetitious. This is because the rules are rather simple, matching each block no matter what its attributes. If the questions were more sophisticated, matches in the model would occur less frequently. Probing the model by clicking around it would therefore be more revealing. A classic case in point is the detection of so-called 'contradictions' in a model.

There are many types of contradictions, but for the following example we'll focus on the simplest:

the case where an element of the model has both useful and harmful side effects. We've picked a simple example model to illustrate how all contradictions in the model can be easily listed, using a single MyCreativity rule:

> produces(&a=*, &b=useful) produces(&a, &c=harmful) "Find a way to obtain {&b} without the need for {&a} so as to avoid the production of {&c}"

At first, the rule looks complex, but look at it more closely. It says: find a pattern in the model where 'a' is producing something useful 'b' and is also producing something harmful 'c'. Here is a screenshot showing the rule being used:
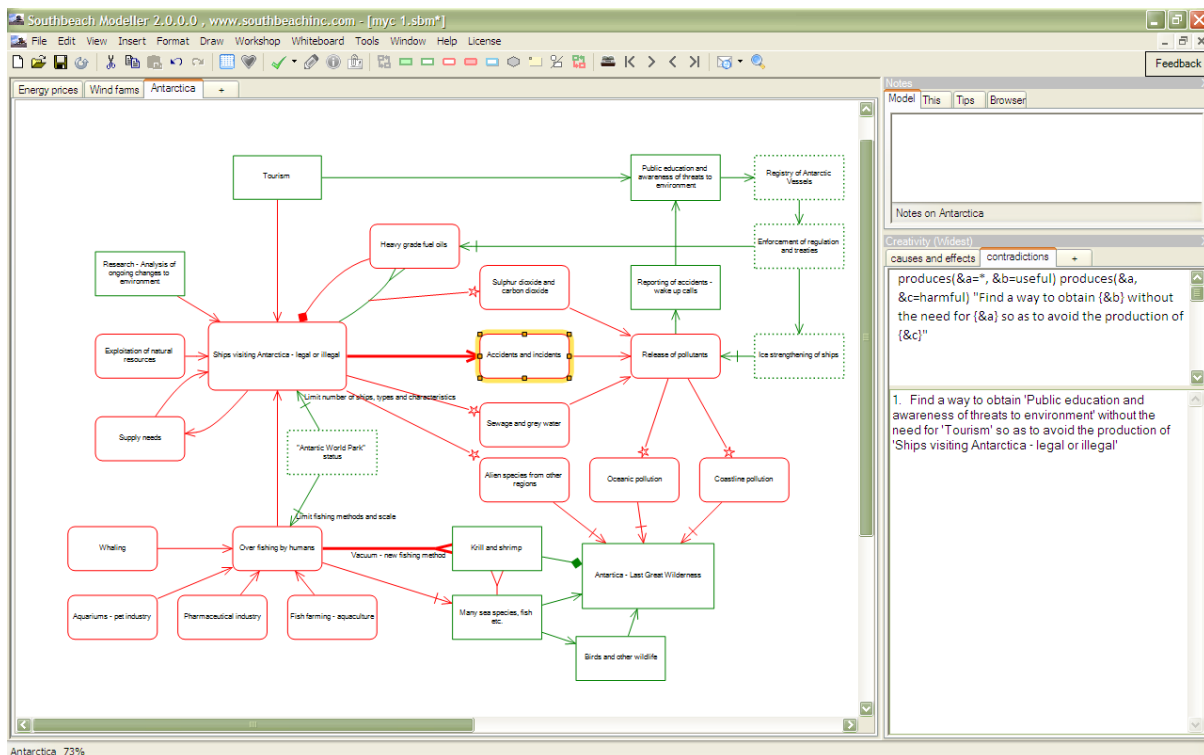

Figure 13 - A model of environmental impacts in Antarctica. The user has selected the 'contradictions' tab. The user has clicked on 'Accidents and incidents' in the model. The extent is set to 'widest', so the software quickly runs around the model matching the rule(s). It outputs a sentence for each match, i.e. contradiction found. In the example only one contradiction exists in the model: Find a way to obtain 'Public education and awareness of threats to environment' without the need for 'Tourism' so as to avoid the production of 'Ships visiting Antarctica - legal or illegal'

Presto!

Hint - press F2 in the creativity panel to hide the rules. Embedding single rules or sets of rules in a model can create a template that performs tasks for the user.

A template can have as many creativity tabs as needed for your template. Some users put a lot of questions in one tab, while others divide up the questions so that they can be applied selectively. Later, we will see how to develop and maintain an entire library of such methods.

Take another example:

When you are working with Southbeach Notation you are 1) extending (elaborating) the model so that it covers more of the problem, or, 2) analysing the model to see what it tells you about the situation, or both at the same time interwoven into the way you work. The questions or suggestions that that are helpful in each case are quite different.

In case 1, a question might be "Does X have a cause?" This question may prompt you to add a block to the model. In case 2, the question might be "How can we prevent X (the cause) from producing the risk?"

Modellers allow you to set up separate creativity tabs for each of the ways you wish to work with the model, elaboration, improvement, 6 hats thinking, goal planning etc.

In the following example the consultant has built a template containing four creativity tabs: elaborate, increase harmful, reduce harmful and simplify:
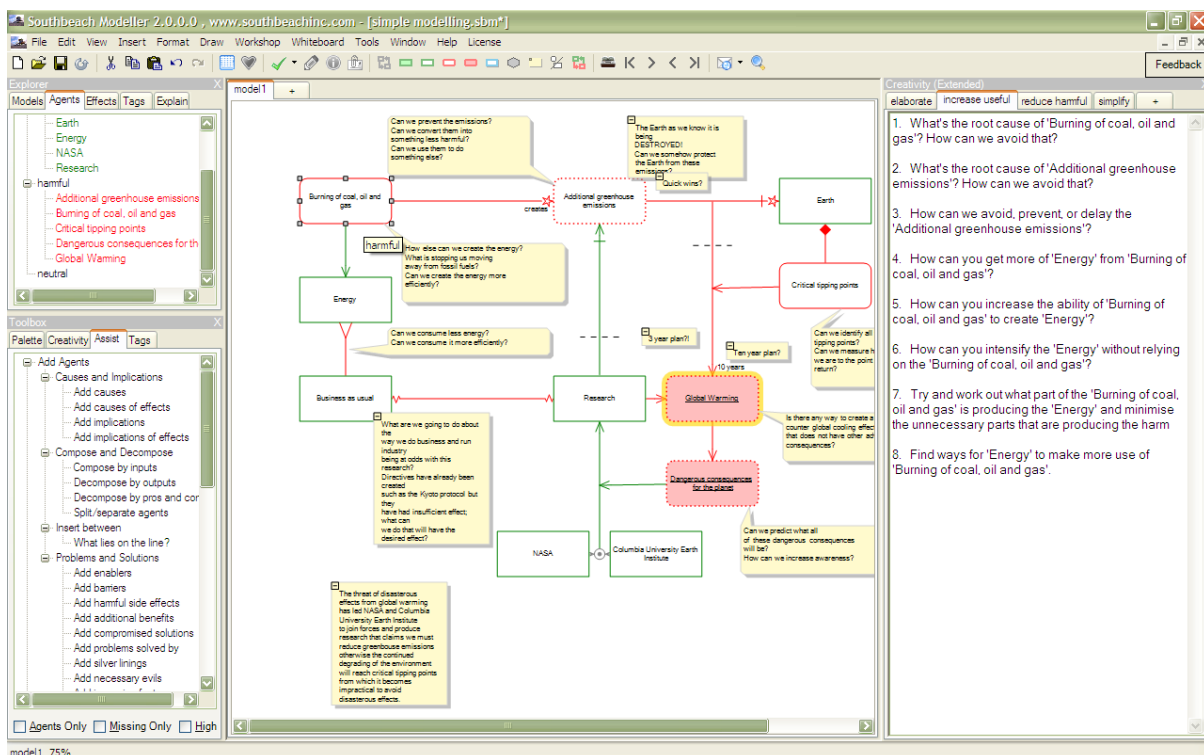

Figure 14 - The template provides four creativity tools. As the user clicks around the model and selects a tab, the appropriate questions are generated - and stored for that model. See Appendix E for a complete listing of the rules used in this example.

As well as storing rules in models, Modeller also permits you to build up a reusable library of rules. These can be combined at a click of a mouse and applied to any model in real time.

The following example illustrates use of the library. The examples are those that come with Modeller. You can extend these as required. The checked boxes are those enabled and generating output. Each part of the tree is a rule set, not just a single rule, so entire methodologies can be captured in the library and brought to bear in your work quickly and easily.
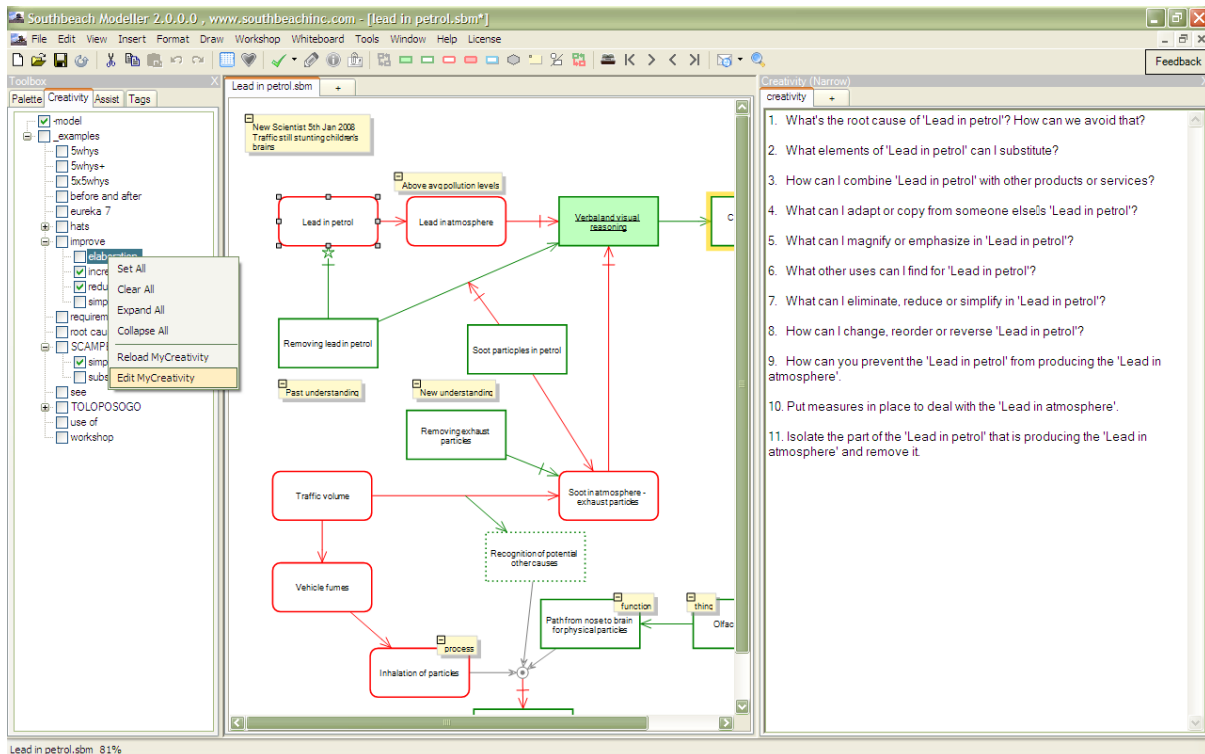
Figure 15 - Showing the 'toolbox' panel, with 'creativity' library. Several rule sets are checked on, and questions are being generated around 'lead in petrol'.

The library is personal to you. The output generated is stored in the model, and distributed in the .sbm file to your colleagues. However, if you wish to distribute the creativity rules themselves, you either embed rules in the model itself, or, give them a copy of your creativity definition files.

There is a great deal more to learn about the MyCreativity language. A reference guide is available separately.

MyReports

In the last section we saw how 'MyCreativity' rules, embedded in models or invoked from the user's library, can bring a model to life by interactively generating questions, suggestions or other directional information as you click around the model. That's fine, but some users like to work in an entirely different way. Modeller can store 'reports' in a model, and refresh them as the model changes.

MyReports builds on MyCreativity. What you learnt in the previous section can also be applied here.

What is a report? Take a look at this example:
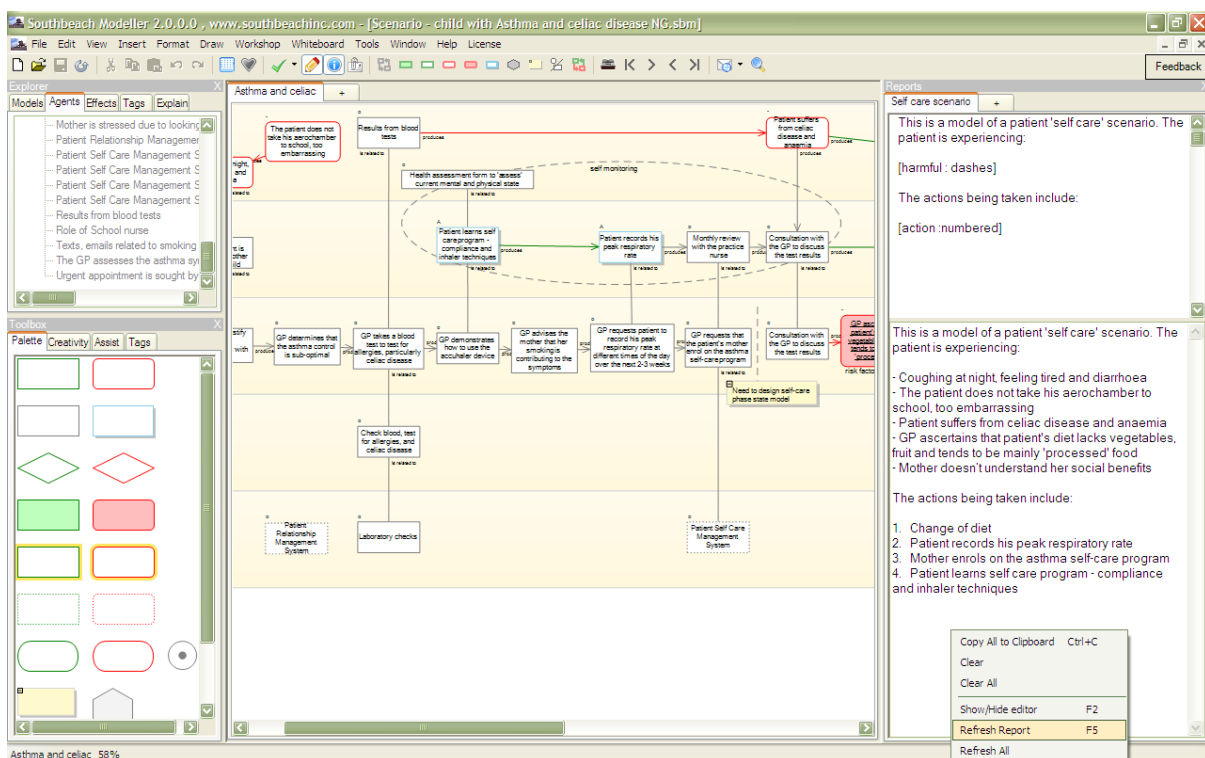
Figure 16 - A Southbeach model, laid out on a 'grid' showing different roles in the provision of 'Self Care' public services. On the right, a report is used to extract key information from the model. The report can be refreshed at any time.

The report template is shown top right (normally it would be hidden). It's very simple in this case. It just contains macros in square brackets as follows:

This is a model of a patient 'self care' scenario. The patient is experiencing:

[harmful ; dashed]

The actions being taken include:

[action ; numbered]

If you know how to use MyCreativity, you will be able to use MyReports right away because they share much of the same syntax. And just like MyCreativity, you can keep as many reports in the model as you like, each in a separate tab.

Creativity is a list of generated output which changes as you move around the model. A report, by contrast, is a template into which information is inserted. They both use the same pattern matching rules.

Some consultants use MyReports to extract key information from a model, and then insert it into a more traditional "Word processed" document. Others, keep longer reports in the Southbeach model file, and refresh them when required. They may later copy them out into emails, Web pages or other documents.

Like creativity, reports can be applied to any model. They let you demonstrate the value of developing the model itself. The effect put into a model 'pays off' when a report is generated. When your colleagues see the output generated from a model, they understand the difference between modelling, and static diagrams.

Here is another example:

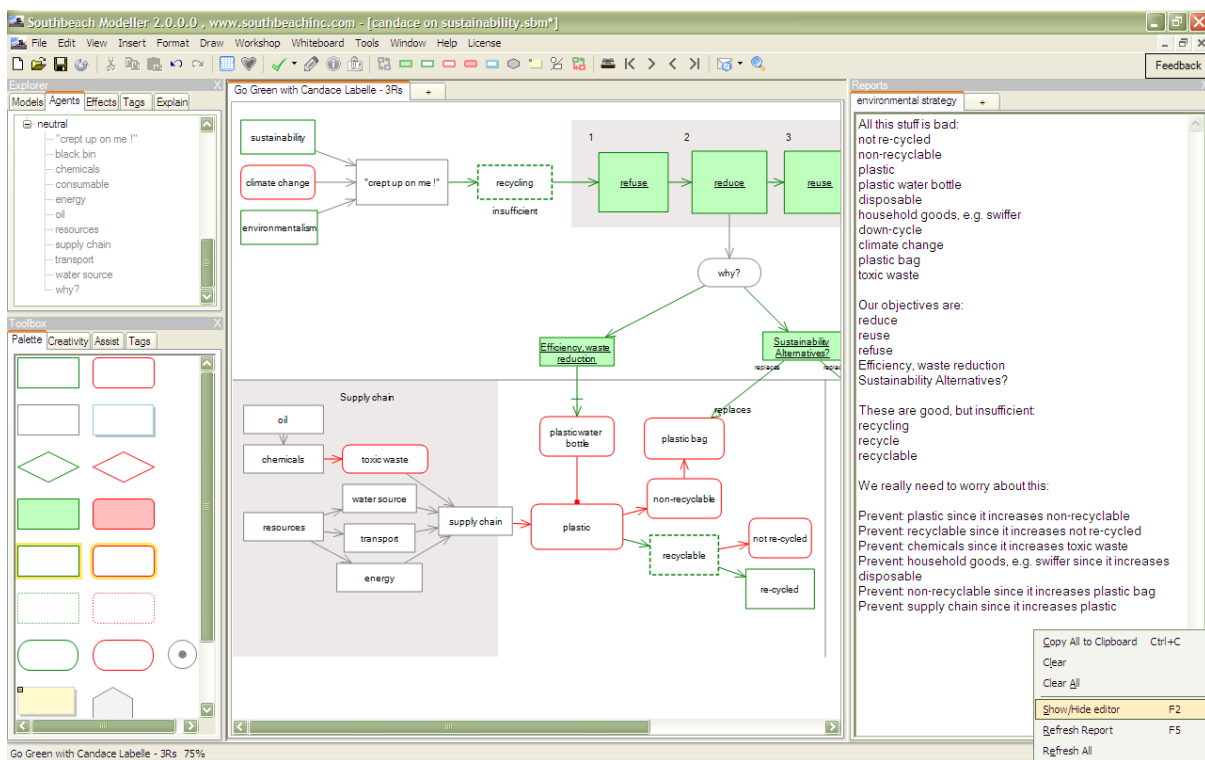Figure 17 - A model of the cause-effect relationships between elements of the 'plastics supply chain', focussing on plastic bags and bottles. A report is pulling out key information and relationships in the model.

The report template can leverage the full power of the MyCreativity language. The advice at the end of the report was generated using:

[increases(, harmful) "Prevent {from} because it increases {to}"]

In the following example, the user has developed an abstract model showing barriers to growth arising from poor sales culture. An ad-hoc report is used to put together a quick agenda for a team brainstorming workshop:
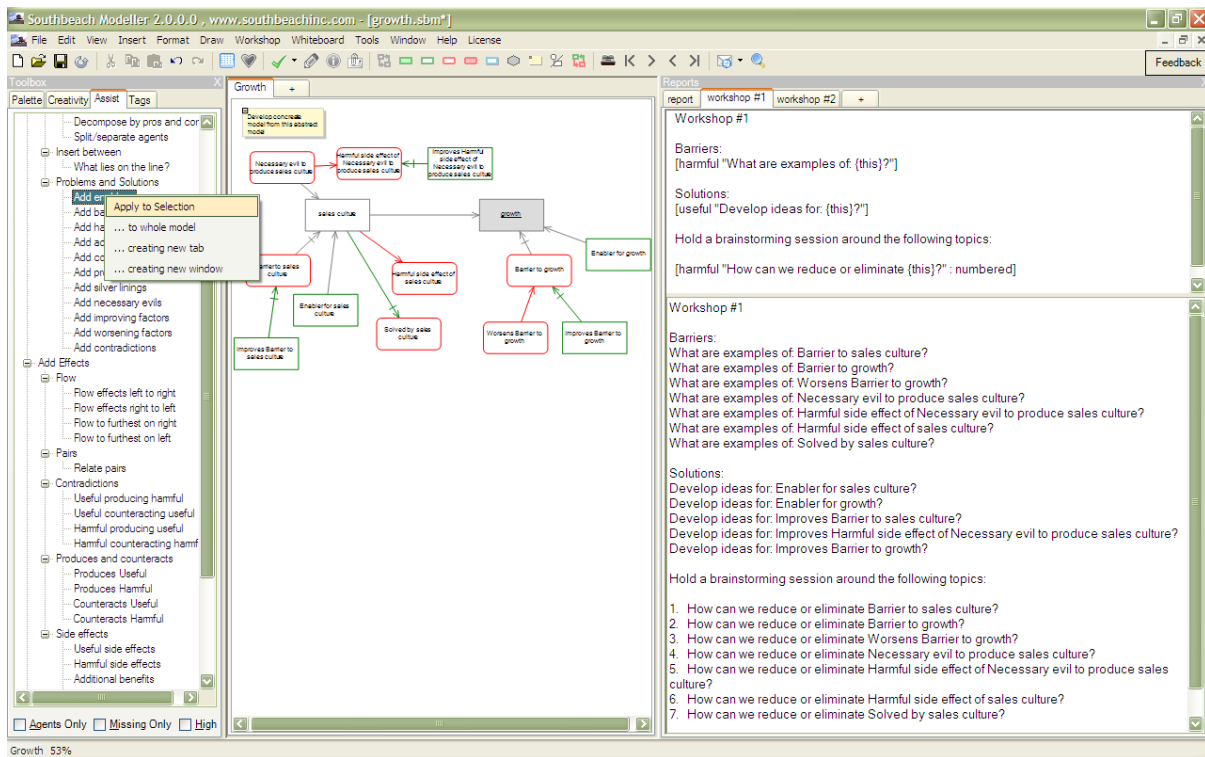

Figure 18 - In this example, a 'quick and dirty' report has been used to build an agenda for a meeting. The model itself, still 'abstract' at this stage, was put together quickly using the 'Assist' tools.

Workshop preparation reports are a simple and effective way to get value from any Southbeach model. Once a model gets complicated, as in any 'real world' situation, rules are the only way to quickly find out the pain points and focus effort on those. Southbeach is a highly scaleable tool. It is able to process thousands of rules in seconds.

The Southbeach reporting engine supports all the features of the MyCreativity engine, and has a few extensions of its own. These are:

1. Arguments for generating numbered output, bullet points, etc.

2. A 'memory', allowing one MyCreativity pattern to pick up a matching set of agents or effects, and then to use these as the basis of another pattern match. In this way, in-direct and chained effects in the model that are not obvious to the 'eye' can be easily seen. Here is an example:

These useful elements increase our goals:
[increases(useful+MI, goal) "{from}"]

These are damaging to the above, and are themselves harmful:
[decreases(harmful, MR) "{from}"]

MI (memory in) can be placed at any position in a pattern, and picks up the blocks or effects that match. MR (memory recall) can then be used in another position in a subsequent pattern. This and other special features of the reporting language, extend MyCreativity, and are explained in the reference guide.

Consulting Toolkits

Using all of the features we have covered in this article, it is possible to conceive of storing an entire "consulting toolkit" in a single Southbeach file. Even if not used as a template, the 'drill down' feature of the explorer panel can be used to dip into such models, allowing them to be merged with current work.
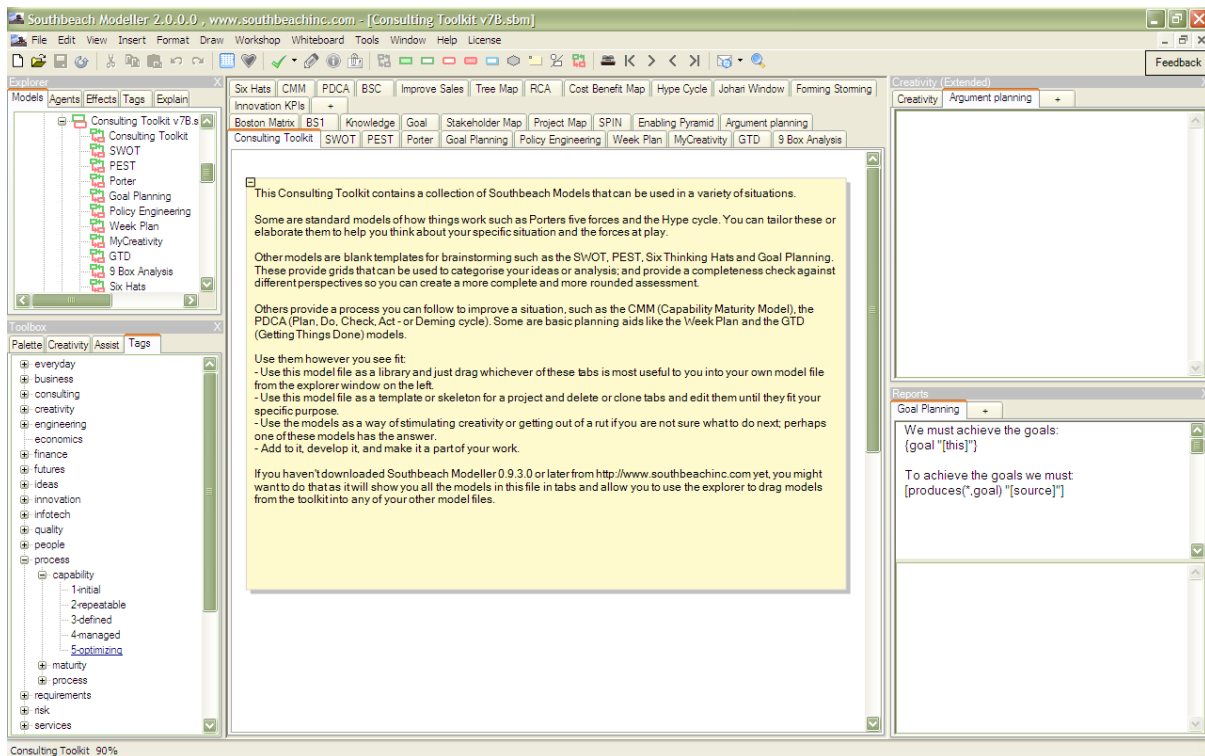

Figure 19 - A consulting toolkit for Southbeach Modeller originally developed by Mark Burnett of BearingPoint. More work could be done to add tags, creativity and reports to each method.

In the next example, a set of 'starter' models has been provided for various approaches to innovation, e.g. 'Blue ocean', 'Buyer matrix'.
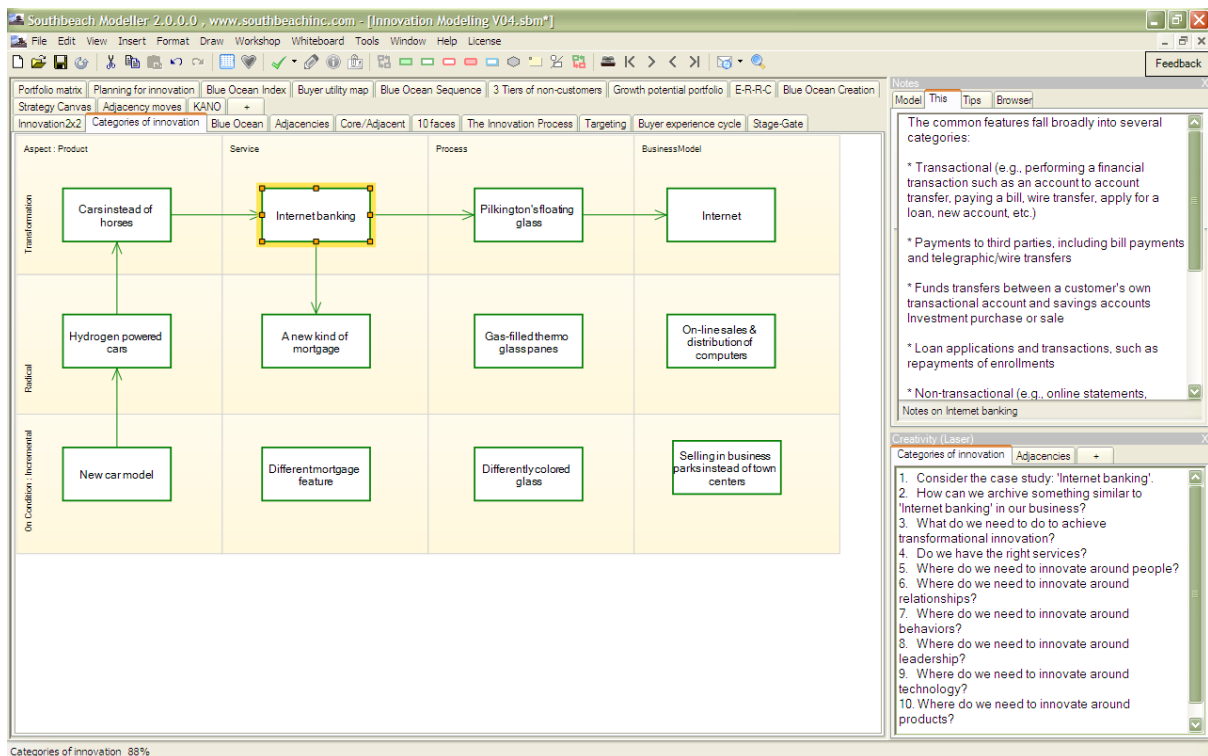
Figure 20 - A template providing tools for innovation projects. The user has selected a model that illustrates different categories of innovation. They have clicked on the "Internet banking" example. A summary is displayed in the notes panel. A consulting check list has been generated in the creativity panel.

A few final useful features

There are a few other features that are useful for building a Southbeach working template:

- Each block in a model can have an associated URL. Thus, a user of a template can refer to associated web resources.

- Each block can link to a related model file. It is therefore possible to link models together if they cannot be held in the same file.

- Click on the canvas with the right mouse menu. You can set defaults for the template.

- Change the size of a block in your model. Use the right mouse menu to set that size as the default size for new blocks of the same type.

Summary

This paper has explained the various ways to build a template for a Southbeach model. Such templates can help with various creative and analytical tasks. This capability allows the consultant to accelerate or deepen their work, or to share best practices with colleagues and their client.

Not every Southbeach user will produce fully fleshed out templates. Many users will 'start afresh' each time. However, all models developed in Southbeach are available to 'drill down' and reuse. With care, Southbeach becomes an effective knowledge system.

The screenshots and rules included in this paper were produced using Southbeach Modeller; a product of Southbeach Solutions Ltd.

Information about the software can be obtained from: http://www.southbeachinc.com

Appendix A - The 6 Hats Template

Templates don't have to be complex to be useful. Here is a screenshot of a simple 'Six Thinking Hats' tool. It is useful in workshops and helps, not only to remember all the questions associated with each hat, but also to build up a model with causal links between the verbal statements made by team members. Such a model can then be further developed, using a variety of Southbeach methods.
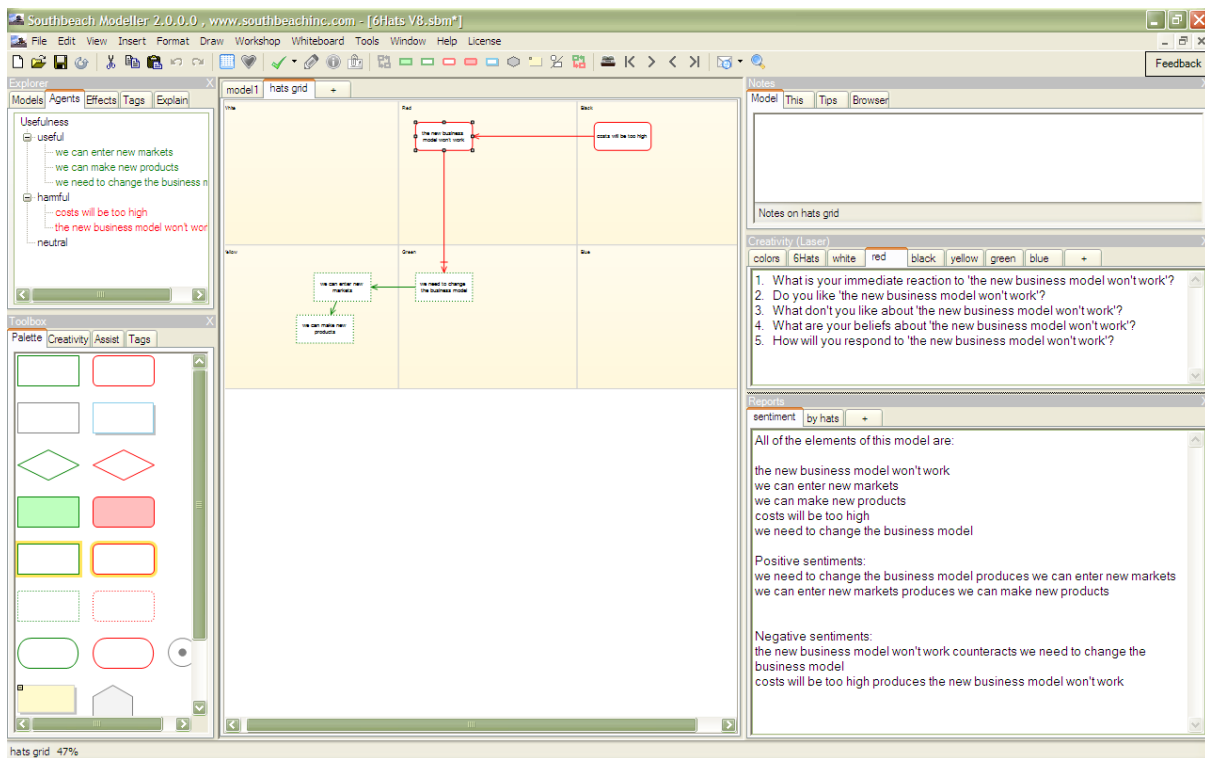

Figure A1 - A Six Hats template in use, showing 'red hat' output, and a current summary report of 'sentiments' of the team.

The template consists of:

- One example model tab. More tabs can be added as required.

- One 'grid' style model tab (illustrated). This allows for the alternative style of modelling, where the position of a block on the grid determines which 'hat' it is wearing.

- Eight creativity tabs. Clicking around the model invokes the rules and generates output.

- Two report tabs. One is a simple report of 'sentiment' in the model. The other lists all elements of the model under the corresponding 'hat'.

The following are the creativity rules for each of the tabs. In this template, the rules are barely more than simple sentences matching any agent or effect in the model:

'Sentiment' report

All of the elements of this model are:

[*]

Positive sentiments:
[increases(, useful) "{this}"]
[decreases(, harmful) "{this}"]

Negative sentiments:
[decreases(, useful) "{this}"]
[increases(, harmful) "{this}"]

'By hats' report

Facts and figures:
[@white]

Feelings and emotions:
[@red]

Criticism:
[@black]

Positive views:
[@yellow]

New ideas:
[@green]

Think about:
[@blue]

Colors tab

* "White - facts and figures - information available and needed"
* "Red - feelings and emotions - opinions, intuition and hunches"
* "Black - devil's advocate - critical judgement, why it won't work, cautions and difficulties"
* "Yellow - positive view - why it will work, values and benefits"
* "Green - innovation and new ideas - alternatives and creative thinking"
* "Blue - the big picture - managing the thinking process"

6Hats creativity tab
* "What are the facts and figures around {this}?"
* "What is your gut reaction to {this}?"
* "What are the flaws and barriers in {this}?"
* "What are the benefits of {this}?"
* "Where does {this} take us? Are there creative alternatives?"
* "How should we think about {this}? Does {this} suggest a big picture?"

//

*(,) "What are the facts and figures around {this}?"
*(,) "What is your gut reaction to {this}?"
*(,) "What are the flaws and barriers in {this}?"
*(,) "What are the benefits of {this}?"
*(,) "Where does {this} take us? Are there creative alternatives?"
*(,) "How should we think about {this}? Does {this} suggest a big picture?"

Note - the apparent duplication is so that the sentences are output whether the user clicks on a block or on an effect.

White creativity tab
* "What do we already know about {this}? What are the facts?"
* "Who else knows about {this}? What light can they shed?"
* "Where is {this} used? What does that tell us?"
* "What is the life-cycle of {this}? What did it come from? What does {this} turn into?"
* "How can we coroborate our hunches about {this}? What evidence is there?"
* "How can we quantify what we know about {this}?"
* "What disagreement is there about {this}? How can we be more objective?"
* "What more do we need to know about {this}?"
* "How can we get the new information about {this} that we need?"

Red creativity tab
* "What is your immediate reaction to {this}?"
* "Do you like {this}?"
* "What don't you like about {this}?"
* "What are your beliefs about {this}?"
* "How will you respond to {this}?"

Black creativity tab

* "Will {this} work for us?"
* "Why can't we do {this} now? What should we in preparation?"
* "What is wrong with {this}? What might cause {this} to break?"
* "What are the risks around {this}? Is {this} safe?"
* "What is {this} in conflict with? Think about ideals, standards and conventions"
* "How will {this} impact on other activities?"
* "What distractions does {this} create?"
* "Who will prevent, stop or derail {this}?"

Yellow creativity tab

* "What are the benefits of {this}?"
* "Why should {this} be useful?"
* "How can we apply {this}?"
* "How can we make {this} work better?"
* "What else can we use {this} this for?"
* "Where else can {this} be used?"
* "What opportunities does {this} create?"
* "How can we use {this} as a resource?"
* "What could replace {this}?"

Green creativity tab
* "Who has a new perspective on {this}?"
* "What new ideas does {this} suggest?"
* "Who has a suggestion about {this}?"
* "How does {this} help us?"
* "Can we create something new from {this}?"
* "What resources can be combined with {this}?"
* "Are there alternatives for {this}?"
* "How can {this} be derived or arrived at in a better way?"

Blue creativity tab
* "What kind of thinking is required around {this}?"
* "What are the useful and harmful consequences of {this}?"
* "What are the main parts of {this}? - how can we break it down?"
* "What are the inputs to {this}? What are the outputs of {this}?"
* "What resources does {this} require?"
* "Where are we with respect to {this}?"
* "Summarize our view(s) of {this}?"
* "What is the next step around {this}?"
* "How can we control {this} better? What governance or process is needed?"
* "Who owns or is responsible for {this}?"
* "What factors should be considered when making a decision about {this}?"
* "How can others be made to understand {this} better?"
* "How would your worst enemy view {this}?" Do they have a point?
* "What decision about {this} have we taken?"
* "What plan or actions does {this} prompt?"

Appendix B - Simple Creativity

These are the rules for the example illustrated in Figure 14. My thanks to Mark Burnett of BearingPoint.

<u>Elaboration</u>

produces(*, useful) "What (additional) resources does the {source} need in order to produce the {destination}?"

produces(*,useful) "What qualities should the {source} exhibit in producing the {destination}?"

consumes(&a=*,&r=@resource) produces(&a,&o=useful) "Where is the resource of {&r} used by the {&a} to produce the {&o} obtained from?"

specifies(@quality,*) "What is the {source} quality related to?"

produces(,useful) "What is the {destination} used for?"

produces(&a=useful,&o=useful) produces(&o,&r=useful) "What other than the {&a} and {&o} is necessary to produce the {&r}?"

<u>Increase useful</u>

increases(useful,useful) "Intensify or get more of the {source} so you can have more of the {destination}."

increases(*,useful) "How can you get more of {destination} from {source}?"

increases(*,useful) "How can you increase the ability of {source} to create {destination}?"

increases(*,useful) "How can you intensify the {destination} without relying on the {source}?"

increases(harmful,useful) "Try and work out what part of the {source} is producing the {destination} and minimise the unnecessary parts that are producing the harm"

decreases(*,useful) "Prevent the {source} from impacting the {destination}."

decreases(*,useful) "Isolate the part of the {source} that is impacting the {destination} and remove it."

decreases(harmful,useful) "Convert the {source} into something useful before it has a chance to impact the {destination}."

decreases(*,useful) "Protect the {destination} from the {source}."

increases(useful,useful+potential) "How can you ensure that the {destination} will be an outcome of the {source}?"

increases(&a=*,&c=useful+potential) increases(&b=*,&a) "How can you create the {&c} without the {&b}?"

increases(&a=*,&c=useful+!potential) increases(&b=*,&a) "How can you intensify the {&c} without the {&b}?"

useful+goal "What else is needed to achieve {this}? What are the pre-requisites or necessary pre-steps?"

harmful "What's the root cause of {this}? How can we avoid that?"

useful+potential "How can we realise the {this} more quickly?"

harmful+potential "How can we avoid, prevent, or delay the {this}?"

replaces(&a=*,&b=*) increases(&b,&c=useful) "Ensure the {&a} also leads to {&c} before the {&b} is replaced."

increases(&a=*,&b=useful) "Find ways for {&b} to make more use of {&a}."

<u>Reduce harmful</u>

increases(*,harmful) "How can you prevent the {source} from producing the {destination}."

increases(*,harmful) "Put measures in place to deal with the {destination}."

increases(*,harmful) "Isolate the part of the {source} that is producing the {destination} and remove it."

increases(useful,harmful) "How else could the {source} be accomplished that would not result in the {destination}?"

increases(useful,harmful) "What else could give the benefits of the {source} that would not result in the {destination}?"

decreases+potential(&a=*,&b=useful) "How can the proportion of the {&a} impacting the {&b} be reduced?"

<u>simplify</u>

increases(&a=*,&b=useful) increases(&a,&c=harmful) "How can you get the {&a} to intensify the {&b} without causing the {&c}?"

Appendix C - TOLOPOSOGO

TOLOPOSOGO is a 5-stage thinking framework proposed by Edward De Bono. Here, each phase has been embedded in a Southbeach template. This could be used to drive personal thinking, or to prepare a checklist in advance of a team workshop.
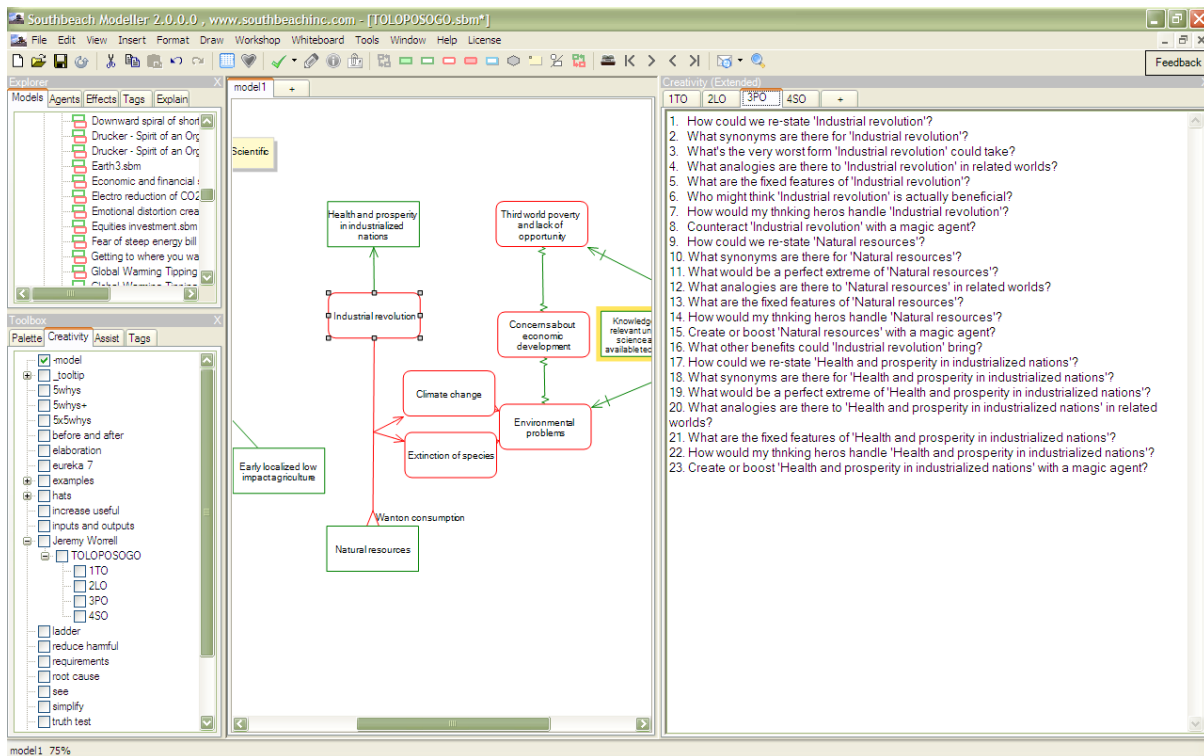
My thanks to Jeremy Worrell of Fujitsu.

Figure C1 - A template for the TOLOPOSOGO thinking framework.

The rules are:

1TO

focus "Might the real focus be broader or narrower than [this]?"
focus "What is it about [this] which really demands some new thinking?"
focus "Would strong thinkers consider [this] is the best focus?"

goal "Might the real focus be broader or narrower than [this]?"
goal "What is it about [this] which really demands some new thinking?"
goal "Would strong thinkers consider [this] is the best goal?"
goal "Could we be more ambitious than [this]?"

2LO

agent "What else do we know about [this]?"
agent "Does [this] have any unique features?"
potential+useful "How can we get more of [this]?"

potential+useful "What else is needed to produce [this]?"
potential+harmful "What can counteract [this] so we don't get as much?"
*(, harmful) "What intermediaries lie between [from] and [to]?"
* "Who else knows about {this}? What light can they shed?"
* "Where is {this} used? What does that tell us?"
* "What is the life-cycle of {this}? What did it come from? What does it turn into?"
questionable(,) "How can we verify {this}?"
* "How can we quantify what we know about {this}?"
questionable(,) "What disagreement is there about {this}? How can we be more objective?"

3PO

agent "How could we re-state [this]?"
agent "What synonyms are there for [this]?"
harmful "What's the very worst form [this] could take?"
useful "What would be a perfect extreme of [this]?"
agent "What analogies are there to [this] in related worlds?"
agent "What are the fixed features of [this]?"
harmful "Who might think [this] is actually beneficial?"
produces(&a=agent, useful) "What other benefits could [&a] bring?"
agent "How would my thnking heros handle [this]?"
harmful "Counteract [this] with a magic agent?"
useful "Create or boost [this] with a magic agent?"

4SO

produces(, harmful) "What could change about [from] to reduce [to]?"
produces+insufficient(, useful+goal) "Could we add more [from], or a different sort of [from]?"
produces(&a=*, &b=useful) produces(&a, &c=harmful) "Could we change [&a] to get [&b] without [&c]?"
action "What else might happen if we [this]?"
useful "Who might seek to oppose [this], and why?"
goal "Will [this] meet legal and compliance constraints? If not, how could we adapt it?"