CITY UNIVERSITY LONDON

EST 1894

Creativity and Goal Modelling: Pilot Studies
Instructions for Assumption Busting Creativity Activity

We can use the Assumption Busting technique to potentially transform our domain and to think of new and creative ideas, which we can later add to our model.

Assumption Busting aims to support exploratory creativity – finding new ideas in the same solution space, and transformational creativity – transforming the solution space, e.g., new actors, new problems, radical new solutions.

Assumption busting involves four steps 1) identifying assumptions, 2) cluster assumptions, 3) model assumptions, and 4) busting!

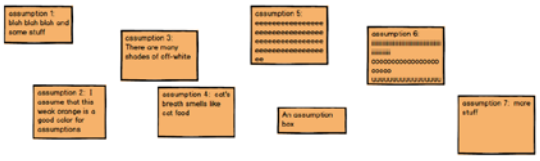
Step 1: Find Assumptions
First we will identify all the assumptions that we make as part of our new system, even the obvious assumptions are important.

We want to start by listing all the assumptions for our system. Think about the new system. What are the assumptions you are making about it? What is so obvious that you would not normally think about challenging it? Make all of your assumptions explicit and list them out, especially the obvious ones that you would not consider challenging.

What is the difference between an assumption, an idea and a requirement?

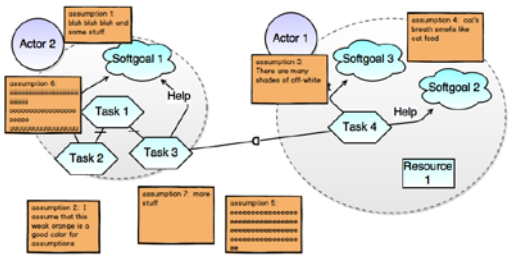
Example Assumptions	**Example Ideas**	**Example Requirements**
My solution always has available electricity	What if we added a choice of time zones?	The system shall record time
This feature will exceed the project budget	Let's link the system to google	Users can log into the system using their google credentials
The customer will not accept a certain product	We should be able to customize the system depending on age	Users will be able to enter their age (optionally)
It is not possible to implement a particular feature	What if the system can predict our moods?	The system will have sensors detecting heart rate

In this activity we are searching for assumptions. Try to come up with 5-10 assumptions about the domain. Capture assumptions in assumption boxes, like this:



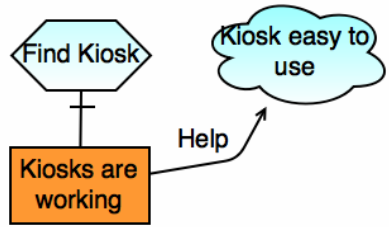
Step 2. Cluster Assumptions

Cluster your assumptions using the actors and elements from the i* model. Which assumptions related to which element? Leave unrelated elements outside the new clusters. See example below:



Step 3. Model Assumptions

Can you incorporate the assumptions into the i* model? Assumption boxes can be added directly to the i* model. They can be decomposed from other elements, or can contribute to softgoals. For example, the task Find Kiosk makes the assumption that the Kiosks are working, which, in turn, helps achieve the softgoal Kiosk easy to use.



Alternatively, assumptions may add (or remove!) actors, softgoals, tasks or resources. Some other assumptions may be hard to incorporate into the model, and can be left as floating boxes.

Step 4. Bust Assumptions

Pick one assumption at a time, and challenge it by asking under what conditions it might not be true. Explore these conditions using different scenarios, no matter how extreme, of what might happen, to explore the space of possible ideas. For each assumption that you discover might not be true, brainstorm new ways in which it might be true, or could be forced to be true, and write down the resulting new ideas and opportunities.

The ideas produced could radically transform the goal model (new/removed actors and goals) or could be added to the model using new model elements or post-its.

If you are familiar with i* analysis labels, below, you can use these labels to explore the denial (busting) of an assumption. How does this affect other elements in the model?

You will start to make new assumptions as you challenge some assumptions, so simply add these to the model with new assumption boxes, and challenge them later. Attach them to the model whenever possible.

<end of activity>