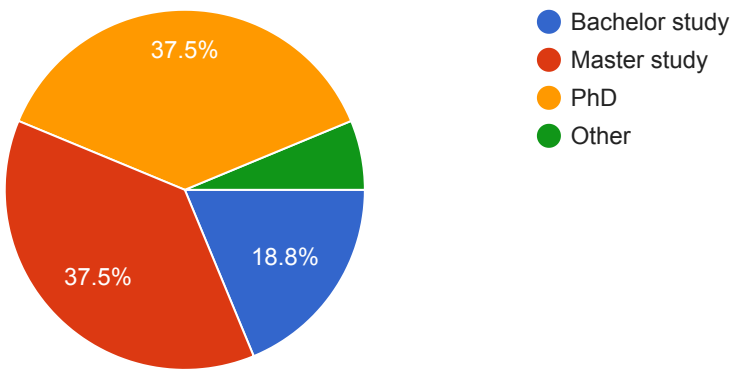
RationalGRL Survey - Profile (1/3)

16 responses

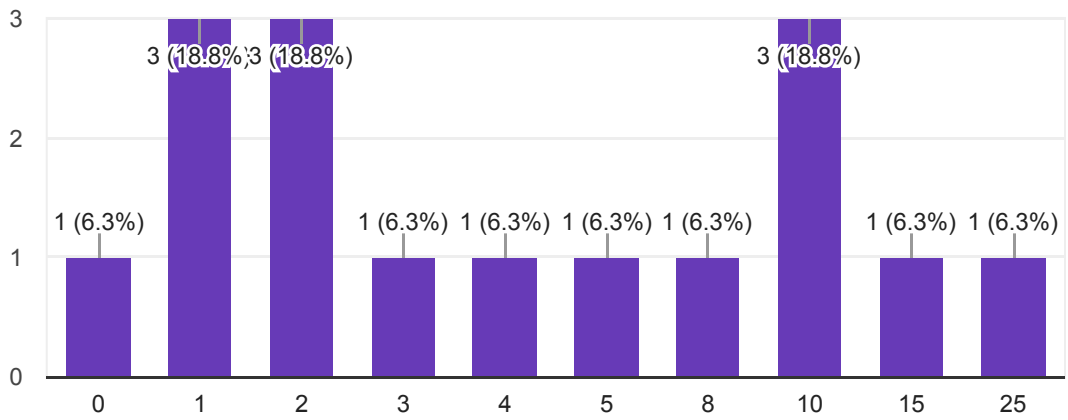
What is the highest level of education you completed?

16 responses



How many years of experience with software development do you have?

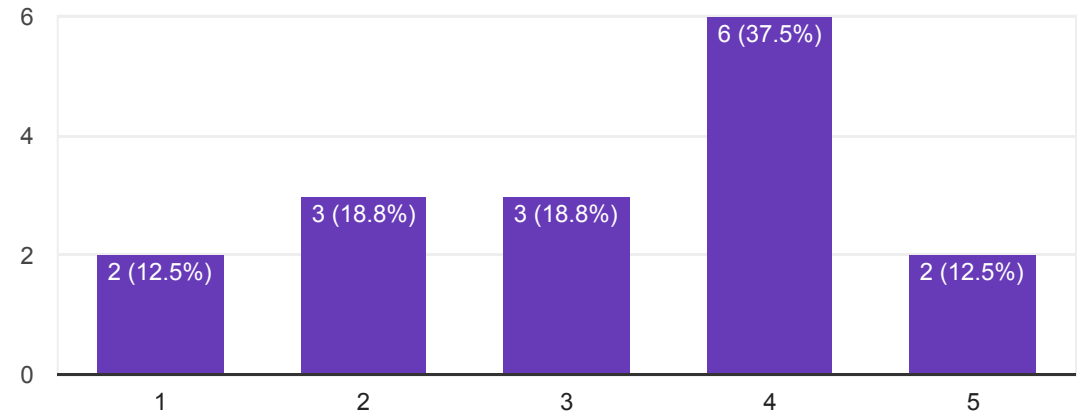
16 responses



How competent do you think you are with modeling the early-phase

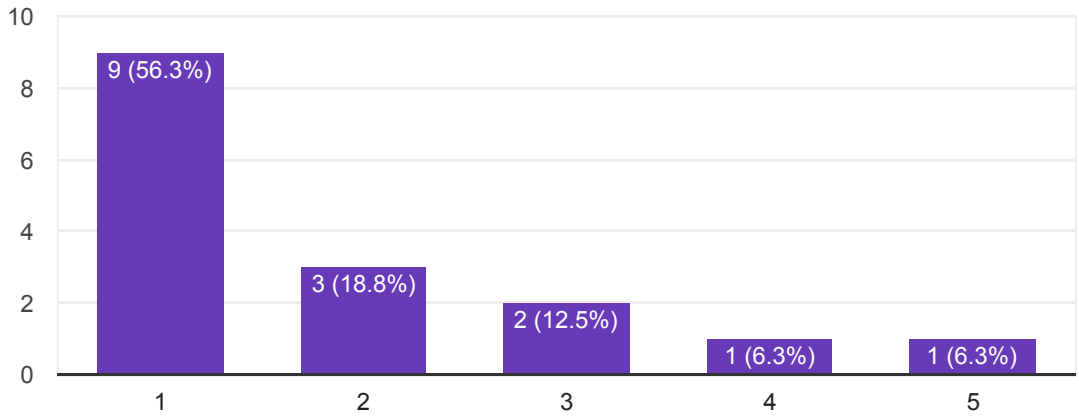
requirements of a software development project?

16 responses



Have you ever used a goal modeling language?

16 responses



If so, please indicate the name(s) of the modelling language(s)

7 responses

GRL (2)

i* (2)

iStar

iStar 2.0, i*, Tropos

KAOS

RationalGRL Survey - The RationalGRL Tool (2/3)

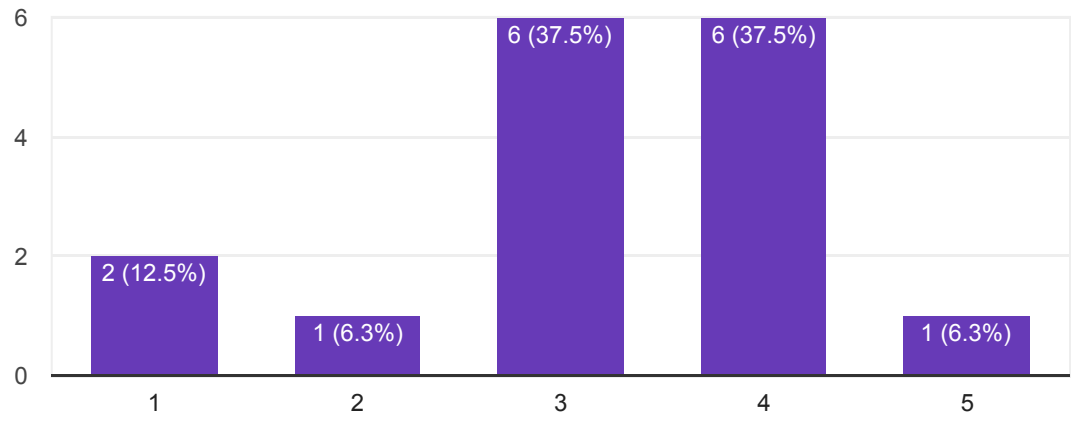
Please upload a screenshot of the RationalGRL model your created

13 responses

No responses yet for this question.

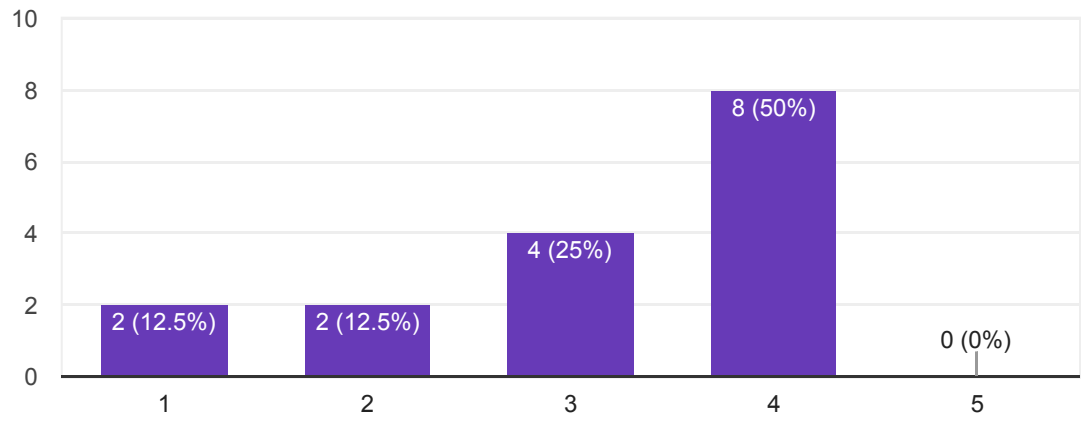
Was it easy or difficult to get started with RationalGRL tool?

16 responses



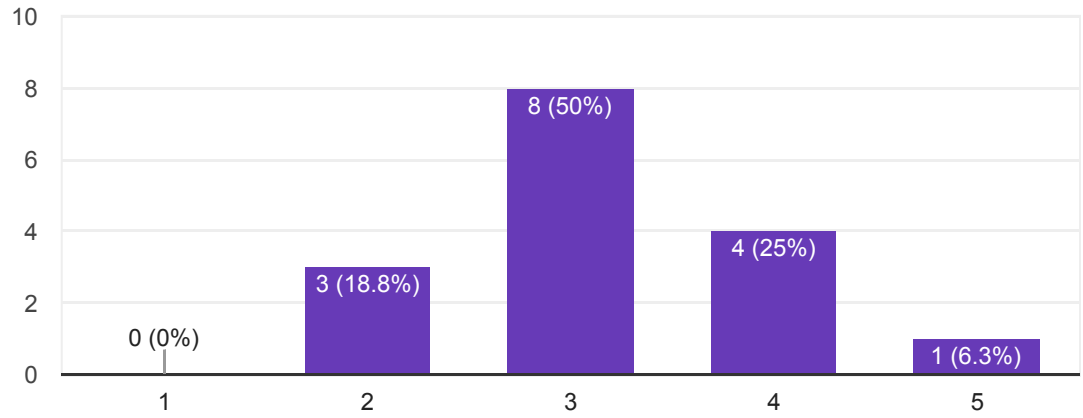
Was the details pane (containing details of an element, critical questions, etc) easy or difficult to use?

16 responses



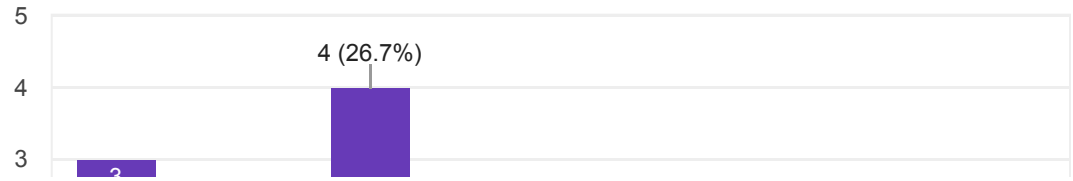
How often did you use the details pane during modelling?

16 responses



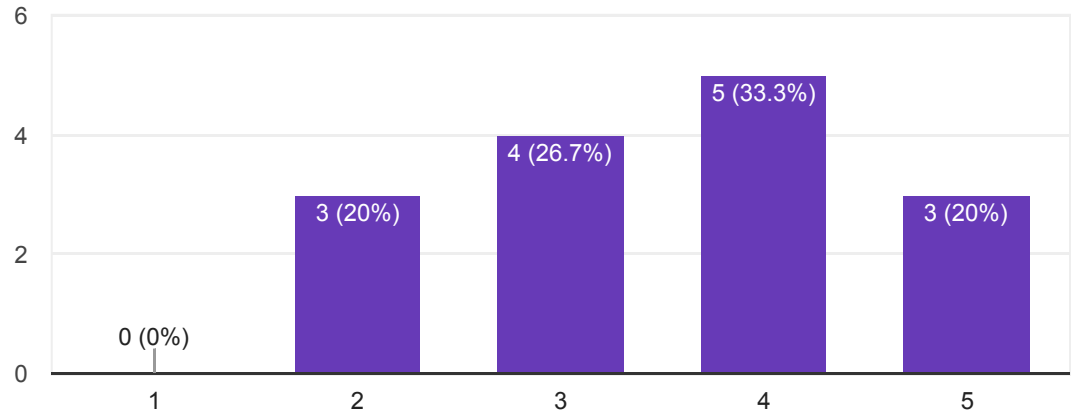
How many “argument” elements did you create during modelling?

15 responses



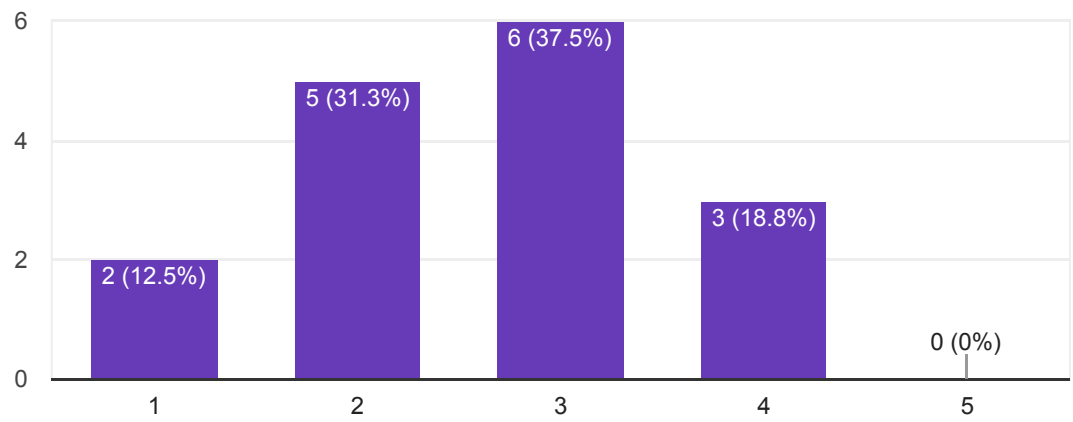
Did you find the way in which the status of arguments and other elements is determined intuitive?

15 responses



Did you find it easy or difficult to model the example discussion using RationalGRL?

16 responses



What do you think are the key strengths and weaknesses of the RationalGRL tool?

15 responses

It is easy to interpret the graph, but I think there might be some ambiguity in the ways people could model their argumentation. When I wanted to attack the positive contribution link between "make new cars" and "realism", I replaced it with another softgoal ("staticity") and attacked that. I felt I was specifying the positive link further. I wasn't entirely sure whether to leave the original link there, which probably means some people would.

It is nice that you can add arguments and that they have an effect on the goal model. At the same time the graph gets cluttered quite fast.

Its nice that you can model the discussion with arguments but it wasn't very easy because i didn't always know how to attack the elements

I like the UI, it is very simple to use and quite responsive. I did not always know which elements to use but that may also be due to my limited experience with goal modeling.

Key strengths: ability to quickly model discussions and relate them to goals and tasks of the organization
Weaknesses: UI could be improved, not possible to zoom in/out, no saving possibilities.

Strengths:
- pretty straightforward

Weaknesses:
- annoying that you have to click on Rename and that it doesn't automatically save
- it doesn't support certain elements such as actors (or at least i couldn't find it)
- i couldn't attack a contributes link

Strength:
- tries to capture the rationale behind the modeling process
- has a (simple) way to compute the status of the arguments

Weaknesses:
- not sure if this is something about Firefox, but it was almost impossible for me to draw relationships. I had to hold the button on the source element, then release the button, this create a link to the bottom right corner of the screen, and then by clicking on an element, the link would be drawn to the right target element. The tool is not mature for experimentation in my opinion.
- I understand the authors' goal, but modeling is already hardly adopted due to the overhead in terms of time, and adding more and more information -- here, about the modeling process -- makes the approach an academic novelty that is unlikely to be ever taken up in practice. I still believe in the value of arguments, but there should be less confusing ways to capture them
- I want to be able to attach arguments to the relationships, but (again, in Firefox) I cannot do that. I can attach them only to the entities
- I do not understand why there is no way to attach an argument for including all the elements. Why is the question about "legitimacy" only made for certain element types?
- The arguments should not be visualized the same way other model elements are visualized. This will make the models impossible to use (goal models are already hard!)
- Again, maybe in Firefox, but I could not create actors.

Strengths: make it easy to map out a system when you're starting a new project, seeing connections betweens elements visually. Weaknesses: 100% manual process, no projected/simulated outcomes based on input. It's more of a mindmap tool but not smart in any way.

strenght: clear and quick overview of goals and tasks etc in a project. Weakness; takes extra time to create.

Strengths: I think having a method combinging arguments and counterarguments with goal models is very useful, because you understand better how the model is created.
Weakenesses: it wasn't very clear when i should put something as an argumnet. also , i dont think its necessary to include all the arguments because some of them are a bit trivial (for instance "Not necessary"). But this could also be because the example i modeled was quite simple.

Weakness: Usability.
• No undo function.
• Possible to get into undefined state simply be removing an attack node (the node is gone but the IE still refers to it).
• No option to edit answers or explanations of attack nodes.
• Not clear why there is an option to "Does the task contribute to other softgoals?" on contribution arrows. It just adds another softgoal node instead of pointing to the softgoal node with the same name that I already created.
• Not clear why "help (+)" is labeled lower case but "Hurt (-)" is labeled with capitalization.
• No way to flip arrows such as decomposition after adding them, but there is no way to tell which orientation is used before clicking it. Also requires going back to documentation to ensure correct orientation is used, the arrow doesn't clearly label which part decomposes into what other parts.
• The discussion was attacking the relevance of the "help (+)" arrow in the model, but the tool did not let me point an attack arrow to the labeled arrow.
• Not clear what the distinction is between the critical questions "Is the softgoal legitimate?" vs "Is the softgoal relevant/useful?". How can an illigitimate goal be useful or relevant? How can an irrelevant goal be legitimate? Any answer of "no" to either one of these implies a "no" to the other. If this is not the case, these questions should be phrased more distinctly from one another.

Key strengths is that it is very easy to use

Its quite easy to get started since you can just start it from the web browser, but conceptually its not so easy. I didn't always know when to use arguments and i didn't use the critical questions a lot.

The concepts described in the supplementary document are interesting, I think the use of a RationalGRL-like tool could be useful.

Clean UI, non-distracting.

What could be improved in the RationalGRL tool?

16 responses

Some GUI interaction functionality.

There is no wrapping in the element description, which makes it difficult to position the elements.

i tried attacking a link but that didnt work, while the discussion seemed to say i should do that.

It would be nice if you could save your work

Zooming functionality, saving

See weaknesses. Also, it'd be nice if the it has some auto-formatting such that all the boxes are arranged automatically.

Not all intentional elements and relationships are supported (e.g. it is not possible to create actors). The decomposition relationship seems to have the wrong arrowhead direction. I could not find a way to attack a contribution relationship. Viewing the red crosses all the time is annoying. I do not understand well the value of the critical questions (maybe just provide a them as hints but then let the user create arguments and attacks freely?). Apart from this, you used an early version of iStar in the example that does not correspond to the notation supported by the tool (there are quite a few inconsistencies in the instructions).

- Usability
- Visualization
- Details pane
- (Re)think how the tool is embedded in the modeling process

Essentially, all what I said above

Maybe make the visual distinction between elements clearer, now you only work with shape differences but that's too subtle. Maybe use heatmaps on specific elements that are 'more active' then other parts (e.g. have many pointers to them).

Furthermore, not quite sure how the Arguments affect the outcome. Sure, it shows you a 'concern' people might have or counter argument on a positive contribution, but are not more than that.

explanation of elements and links on hoover.

I was confused about the decomposition link. I didn't really understand how to attach it, and what was then decomposing into what.

See above.

Rename didn’t always work in the beginning
You cannot change the answer of a critical question afterwards
Unclear where to drag the Links to. Better to show a colored border when dragging into the element so that you know that you have to drag it into there
What are the green circles when clicking on a Link?
Is it possible to zoom out for larger models?

The canvas was very small and I should change this easily. Also there's some other usability issues, sometimes an element didn't disappear when I clicked the red cross.

Sadly, the UI did not work for me well enough to try the tool extensively. Support for zooming/moving around the working area would be nice. I was unable to add a "attack" type link when I wanted to model incompatible goals: the fact that I want to model something in a way that is not correct/supported is probably related to my inexperience with Goal modeling tools. I was not consistently able to use the cross-symbol next to links to remove them.

Controls aren't intuitive, colors might help reading paths. Selection state of components aren't visible.

Do you think a more mature version of the RationalGRL tool can be used to capture early-phase requirements in an actual software development project? Why (not)?

15 responses

Yes, it forces one to think about argumentation and visualising that makes it intuitive.

Yes, having the possibility to add arguments seem quite useful.

yes, its nice that you see why something has been modeled.

I think so, but I am not sure if I would use it myself. I haven't used goal modeling before and we never use it in our organization. But perhaps if someone is experienced in it, it can provide a benefit.

Perhaps, but I don't directly see the value it. I wonder whether it is actually clearer than just a textual representation. On the other hand, I am not very familiar in this domain.

No. At first try, the modeling language doesn't seem to be very expressive. For example, you cannot model interactions, or that tasks should be executed in a certain sequence. If the tool is meant as a way to formalize the discussions about a design using the critical questions, then I'm missing things like having alternatives to the design. Also it seems very limited that you cannot add your own critical questions.

While I find it an interesting academic endeavour, I doubt it is cost effective in an industrial setting.

It really depends on what is meant by "more mature version". If this is about usability only, the answer is "no". In order to be applicable, the authors shall study how modeling is conducted in reality, and identify opportunities for a neat embedding of their technique into the actual modeling process. It is clear that there are good ideas, but little attention is paid to how people do create models.

I think it can, but maybe try to find a way to combine it with more regular/mainstream requirement gathering such as user stories and customer journeys, they provide more visual information and make it bit more 'humane'. Other than that, i really like the links and dependencies between elements.

yes, because it creates a clear scope for the project, what the goals are.

Depends what is meant with 'actual software development'. I am not sure if people actually use goal modeling in industry often, but if they do then this extension could be useful.

Yes, with some polish and clarification, this tool seems to provide a nice way to document both hard/soft requirements for a project as well as discussion points and answers to them, something that can create clarity for all stakeholders as well as avoid infinite round-table discussions.

Generally I think its useful to explicitly document arguments of a discussion. Often arguments are lost and you end up having the same discussion all over again, so having these somewhere explicit is useful. I think it would be good if the arguments would be connected to more architectural elements, such as data structures etc. But probably that's not the goal here since it is about the early-requirements.

Perhaps. I think the overhead of inputting a (detailed) discussion in a structured manner into any system makes adoption difficult. And while such a structured representation might add clarity add first, I think as complexity of the requirements increase the complexity of the discussion may simply explode.

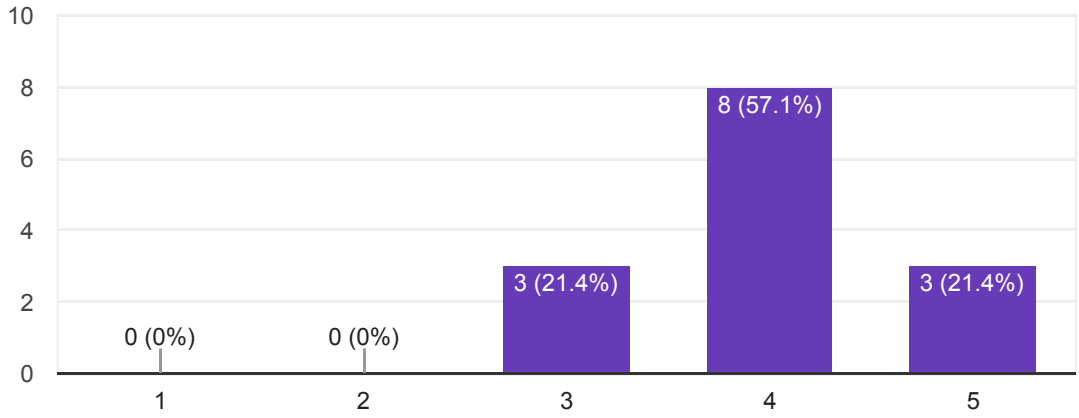
Maybe, but the manual input is too complex and takes too much time. An automated process of parsing the conversation log would be much more helpful.

RationalGRL Survey - Comparison (3/3)

Do you think the arguments and counterarguments of RationalGRL are a

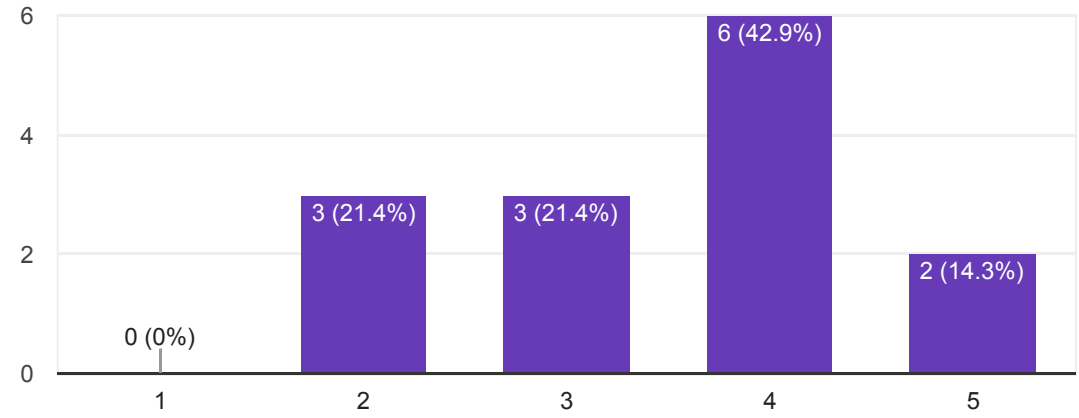
useful extension to standard goal modelling?

14 responses



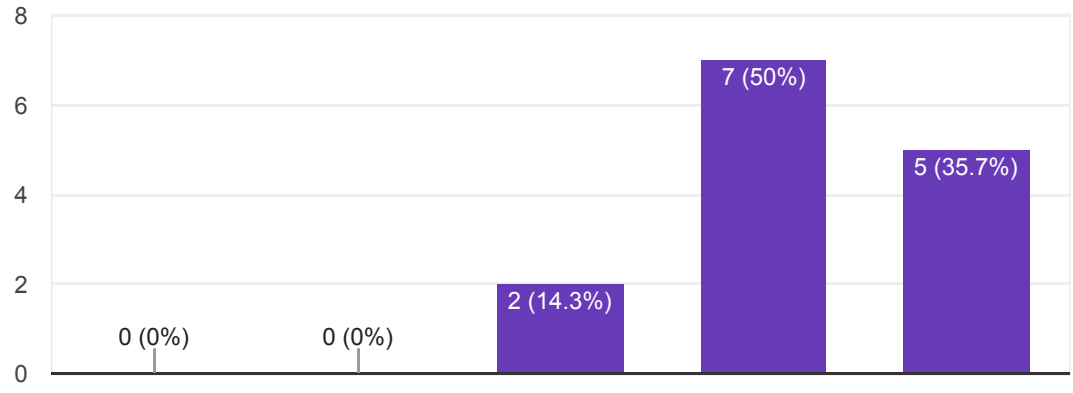
Do you think the critical questions and answers in the details pane are a useful extension to standard goal modelling?

14 responses



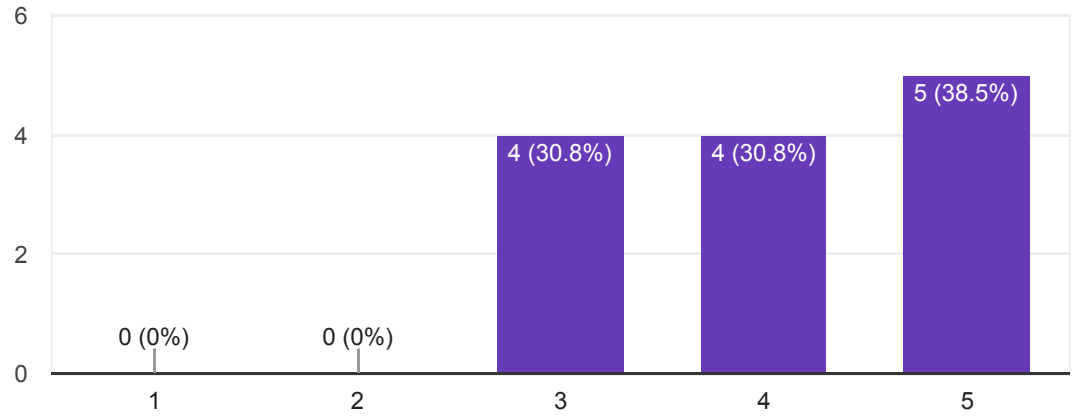
Do you think the automatic determination of the status of arguments and elements is a useful extension to standard goal modelling?

14 responses



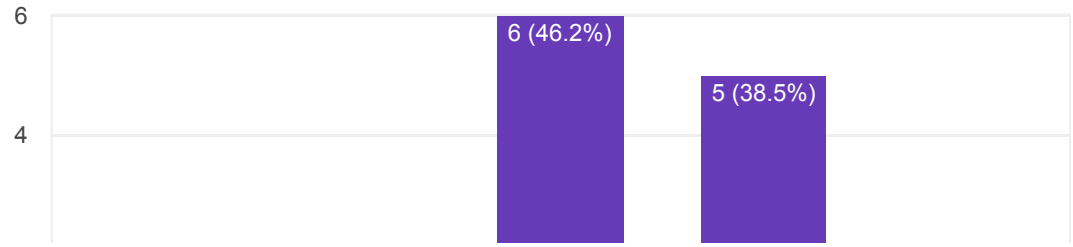
Do you think using RationalGRL instead of a standard goal modeling language makes it easier or more difficult to for someone to express beliefs and opinions in a goal model?

13 responses



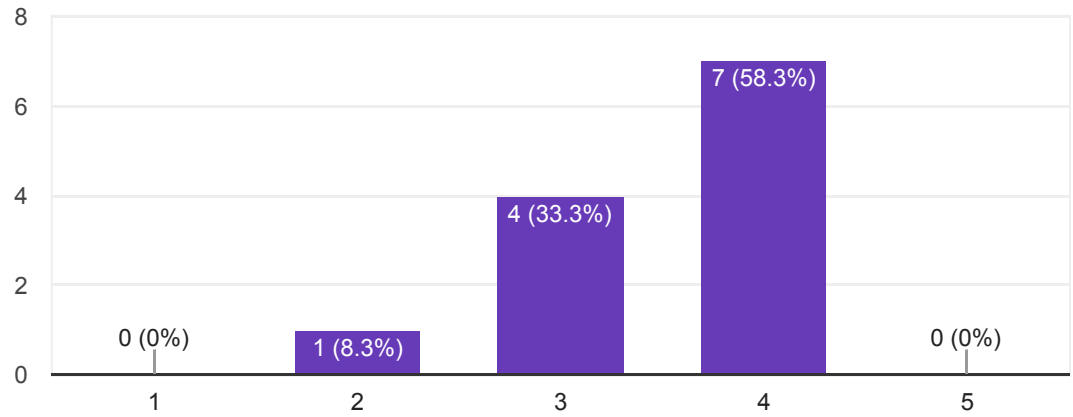
Do you think using RationalGRL instead of a standard goal modeling language makes it easier or more difficult to for someone to determine the effect of beliefs and opinions on the resulting goal model?

13 responses



Do you think using RationalGRL instead of a standard goal modeling language makes it easier or more difficult to for someone who is not the original author to understand the goal model? Please motivate your answer.

12 responses



What are in your opinion the advantages of the RationalGRL language over standard goal modelling languages?

14 responses

Clear communication about argumentation and forcing people to think in those clear terms.

The fact that you can use arguments and that they influence the goal model. Then if you have another argument it has again an effect.

you can better model the discussions because the arguments

I think the main difference is that you can add arguments and that you can answer questions that help you to develop arguments. This is a nice feature, since it help you to develop the model.

If I understand it correctly, the main advantage is that discussions can be modelled explicitly, while in standard goal modelling language this is not possible. This seems useful, especially since these discussions would get lost otherwise.

It's useful that discussion and explanation are close to the diagrams. It's also can be handy that the tools shows the status of discussions about certain elements.

the higher the complexity of models, the more difficult to understand by stakeholders they become. In technical settings and models close to implementation, the amount of details needed and the need to be very precise motivates complex modelling languages. However, I consider that early requirements modelling languages should be kept simple to facilitate understanding and discussion. While recording the discussion itself could be useful to provide rationale for the modelling decisions, I do not see the cost-effectiveness of doing it proactively. I would rather use a system that does this automatically for me (recording the modelling session).

Its expressiveness, as it makes the arguments more evident

The fact that you can add arguments and thus have a better view on your model.

no experience with (standard)goal modelling languages.

- Being able to add arguments
- Its very simple and because you can use it directly from the web. I like that, because often these kind of tools require a difficult setup.

I'm not familiar with a standard goal modelling language

Understanding the goal model better because the arguments are explicit

Detailed logs, and a way to see how decisions are being shaped.

What are in your opinion the weaknesses of the RationalGRL language when compared to standard goal modelling languages?

12 responses

The apparent increase in complexity might lead to negative perceptions, even though the clarity of argumentation should make things simpler in the end.

It becomes more difficult to learn the language because there are more elements. Also the critical questions take some time to get used it, and I actually haven't used them in my modeling.

the tool can be improved because sometimes i couldn't draw a line really well

I am not sure if the cognitive overload is worth the net result.

I am not sure.

Modeling like UML seem more expressive and driven by real world use cases. I also think that the critical questions are too limited. Furthermore, for most discussion it seems like a simple reply-style message systems would be easier.

Goal models are already complex, and adding yet another layer of complexity scares me. I have worked for years on the effect of context on goal models, and my conclusion is that this was very interesting

academic work but with close-to-zero practical implications, unfortunately.

The capturing of arguments should be non-intrusive and the arguments should not appear in the goal model itself.

The reasoning at the moment seems simplistic. You basically have a chain or disagree/agree/disagree/agree arguments. This is only a subset of the capabilities that are offered by (formal) argumentation techniques, and I feel like more can be achieved. In other words, the added value of the reasoning would be justified if the reasoning is more complex than what a human can do with minimal effort :)

None - it's an enrichment to the language, as sort of an 'extra feature' or 2.0 version.

no experience with goal modelling languages

I think some other goal modeling languages have quite sophisticated analysis techniques, which is lacking here. On the other hand, it is possible to export to GRL so I guess the analysis can be done there.

The graph may become cluttered.

No experience with other GML.