Before we start…

1. Think of a quick, interesting fact. Can be about yourself, maths etc.

2. Ensure you are in pairs, there is a small amount of audience participation!

How to give (and not give) a good talk

Cameron Smith (Postdoc (Oxford/Bath), SAMBa Cohort 3)

SLS

12/10/23

Outline

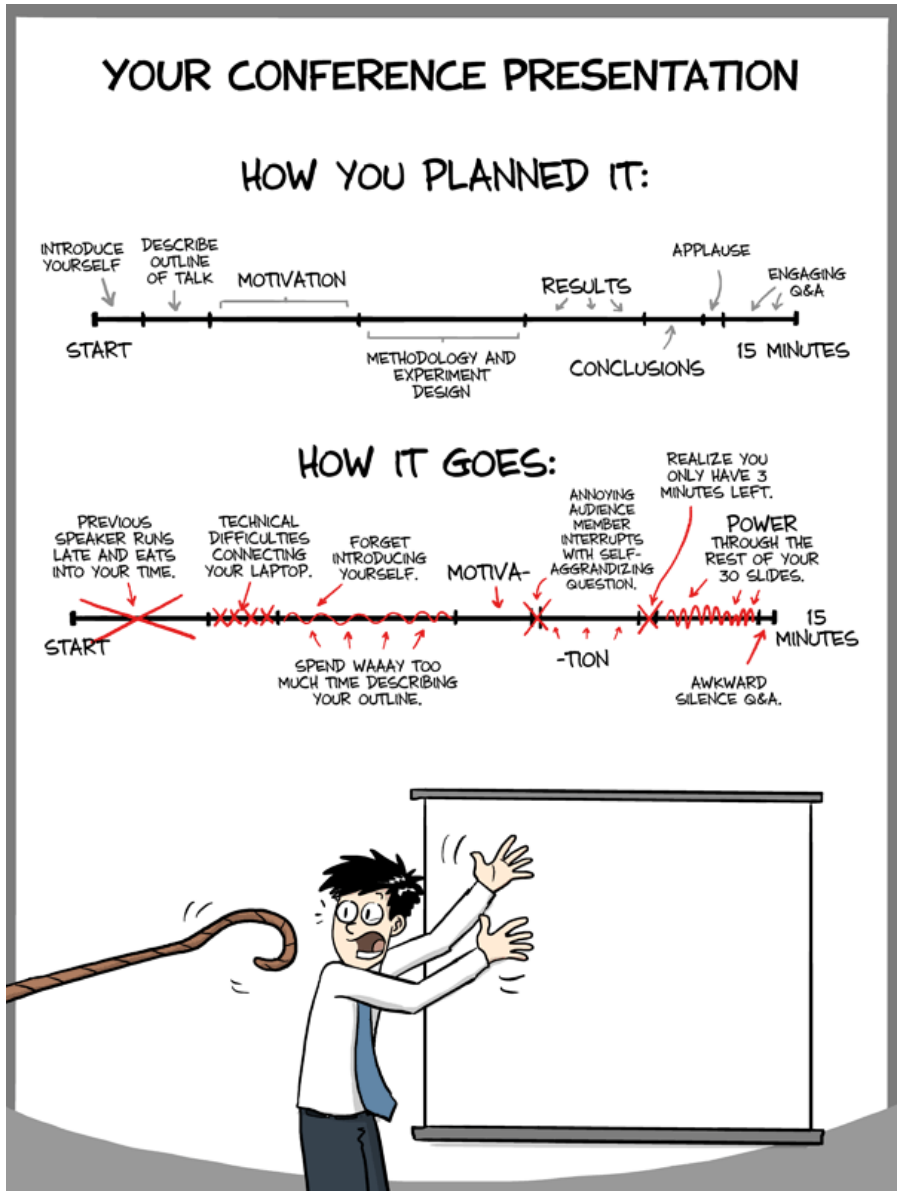
Three stages of a presentation

Preparation

Presenting

Reflection

(Extra tips)



PhD Comics: “How your conference presentation goes”

Preparation

Preparation: planning

This bit seems a bit obvious but…

Preparation: planning

This bit seems a bit obvious but…

When?

Preparation: planning

This bit seems a bit obvious but…

When?

Time and date?

Put in calendar.

Reminders?

Preparation: planning

This bit seems a bit obvious but…

When?

Time and date?

Put in calendar.

Reminders?

Where?

Preparation: planning

This bit seems a bit obvious but…

When?

Time and date?

Put in calendar.

Reminders?

Where?

Online?

In person?

Preparation: planning

This bit seems a bit obvious but…

When?

Time and date?

Put in calendar.

Reminders?

Where?

Online?

In person?

Facilities?

Preparation: planning

This bit seems a bit obvious but…

When?

Time and date?

Put in calendar.

Reminders?

Where?

Online?

In person?

Facilities?

Access to computer?

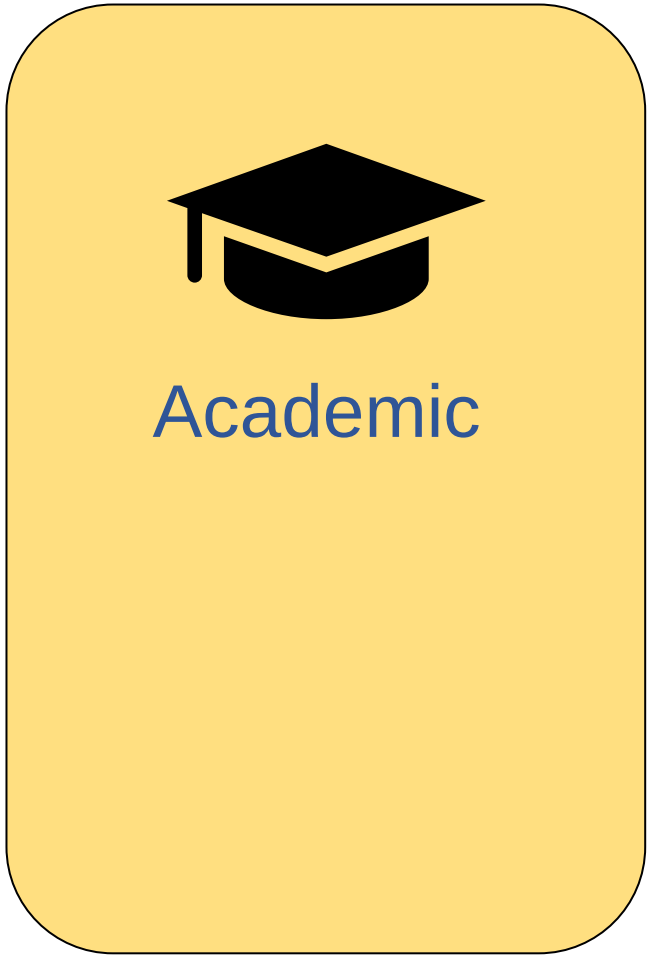
Black/white boards?
(Be careful with this online/hybrid!)

Preparation: audience

This is something that needs to be thought about early on.

Preparation: audience

This is something that needs to be thought about early on.



Preparation: audience

This is something that needs to be thought about early on.

Academic

Is everyone an expert?

- Specialised conference.
- More general audience.

Preparation: audience

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Academic

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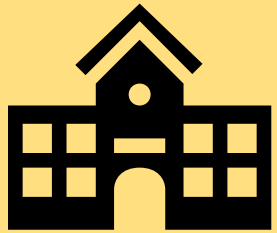

Outreach

Preparation: audience

This is something that needs to be thought about early on.

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Is everyone an expert?

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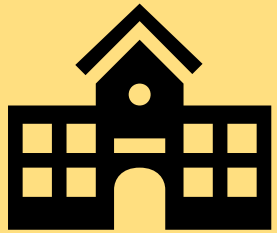
- More general audience.



Outreach

What type of outreach?

- Schools.
- Families.
- General public.

Preparation: presentation

There are lots of aspects to consider here.

Preparation: presentation

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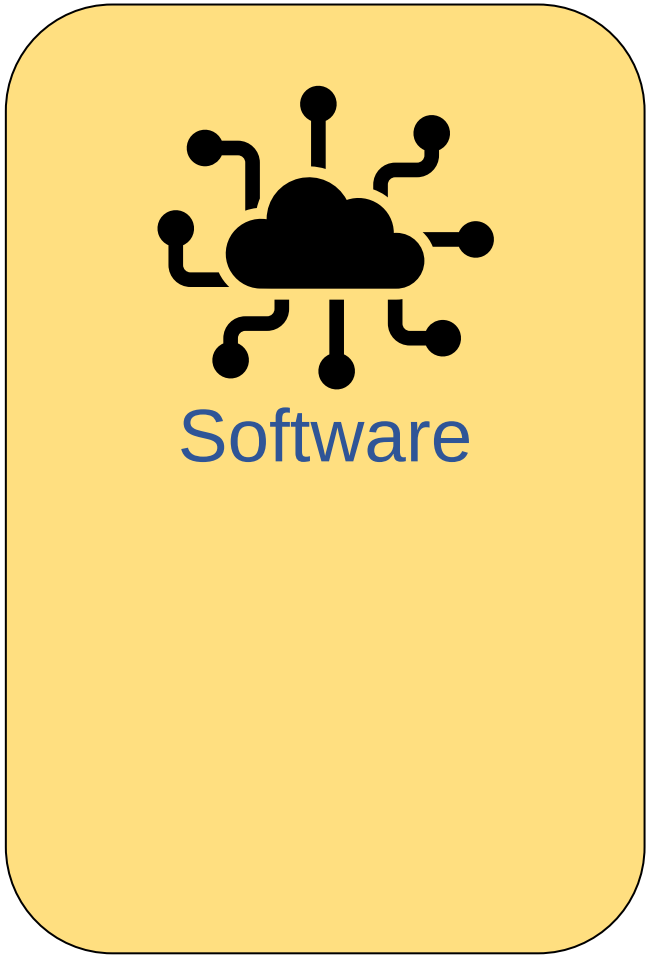

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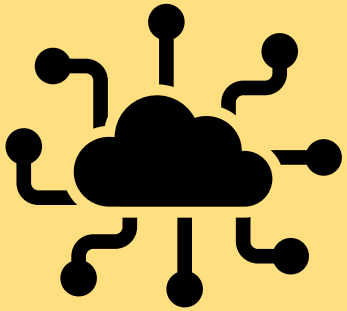
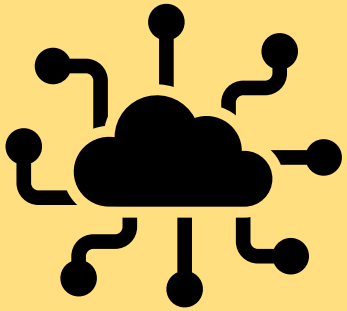


Software

Visuals

Preparation: presentation

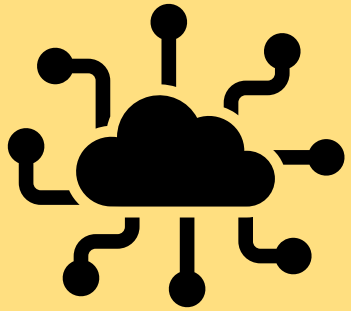
There are lots of aspects to consider here.



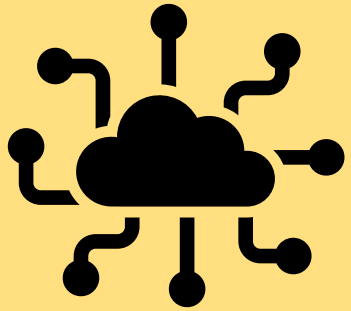
Software

Visuals

Narrative



Software



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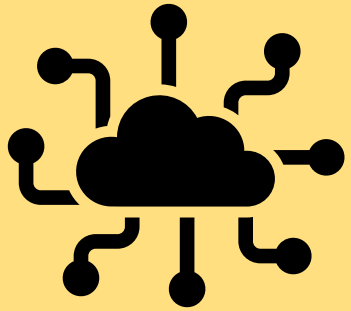
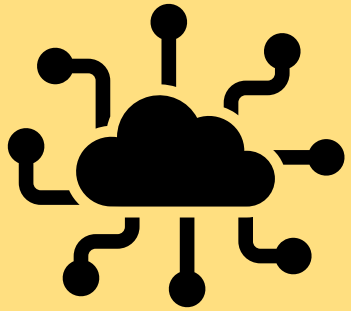


Software

LaTeX



Software

Videos

LaTeX

Software

Videos

Animations

LaTeX

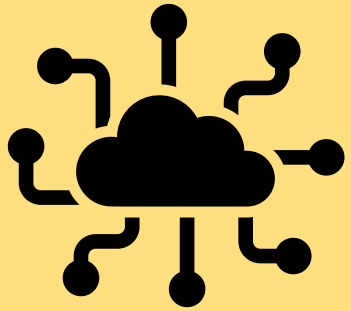
Software

Videos

Animations

Purpose built presentation software

LaTeX



Software

LaTeX

Videos

Animations

Purpose built presentation software

Requires add on for Latex

Software

Videos

Animations

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Easy maths integration

Software

Videos

Animations

Purpose built presentation software

Requires add on for Latex

LaTeX

Easy maths integration

“Professional styling”

Software

Videos ✅

Animations ✅

Purpose built presentation software ✅

Requires add on for Latex ❌

LaTeX

Easy maths integration ✅

“Professional styling” ✅

Images go where they want ❌

Software

PowerPoint	LaTeX
Videos	Easy maths integration
Animations	“Professional styling”
Purpose built presentation software	Images go where they want
Requires add on for Latex	Less creativity

Software

Videos

Animations

Purpose built presentation software

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Visuals

Colour: Useful for drawing attention, be mindful of colour-blindness.

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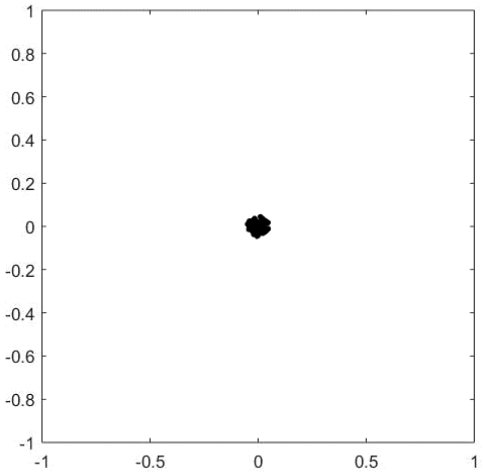

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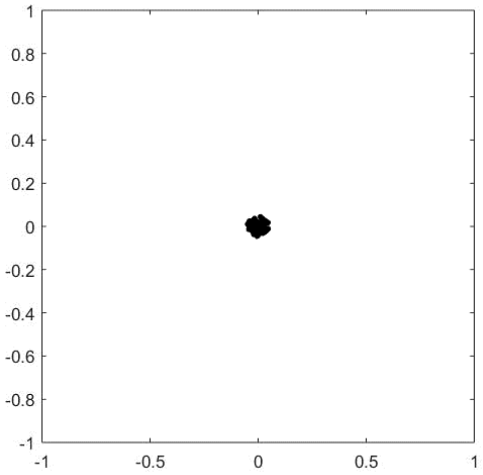

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Visuals

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Lots of text/equations may switch people off.
Try not to read off a slide unless necessary.

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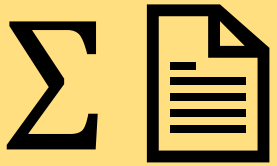

Animation can also draw attention, but can also overload. Useful for “withholding” info.

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“IS THIS NECESSARY?”

?

eful for
tention, be
colour-

Σ

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Useful for
g” info.

SARY?”

Narrative

eful for
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SARY?"

Narrative

What is the objective of the talk? What should audience take away?

eful for
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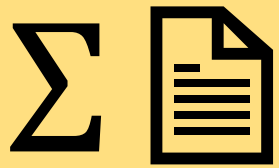

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SARY?"

Narrative

What is the objective of the talk? What should audience take away?

3

<u>Rule of 3</u>:
Tell them what you're going to tell them; tell them; tell them what you've told them.

eful for
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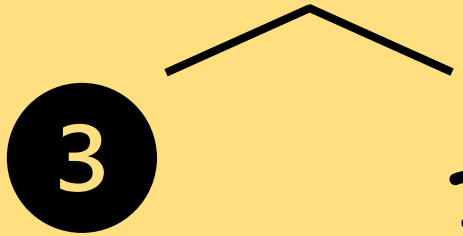
SARY?"

Narrative

What is the objective of the talk? What should audience take away?

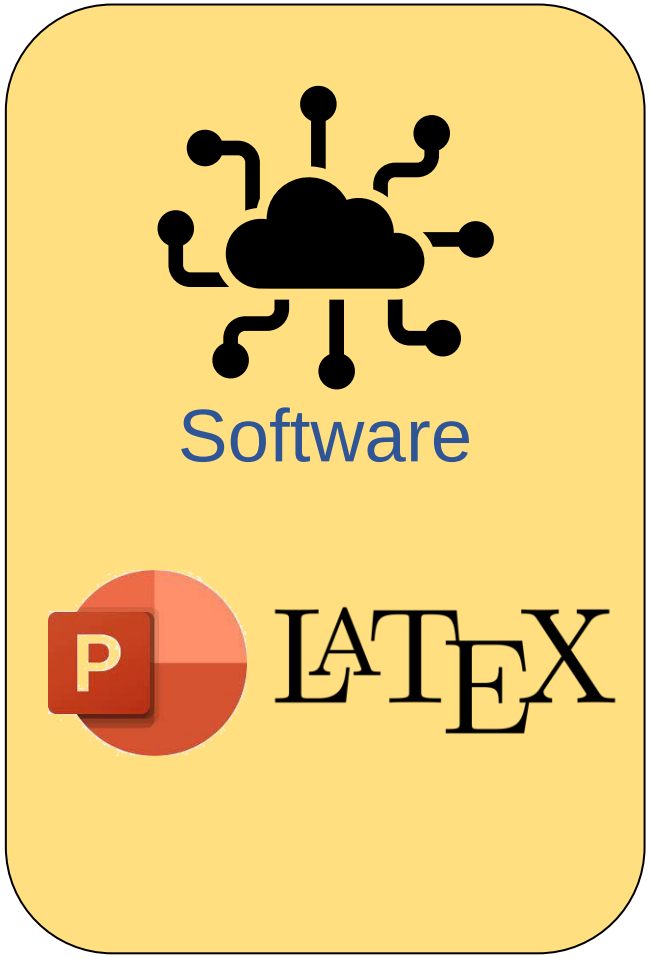


<u>Rule of 3</u>:
Tell them what you're going to tell them; tell them; tell them what you've told them.

<u>Highlighting:</u>
Highlight key points on slides if necessary. Reminds audience and yourself.

Preparation: presentation

There are lots of aspects to consider here.



Aside: figures

Aside: figures

The following is a figure from “Growth model interpretation of planet size distribution”:

Aside: figures

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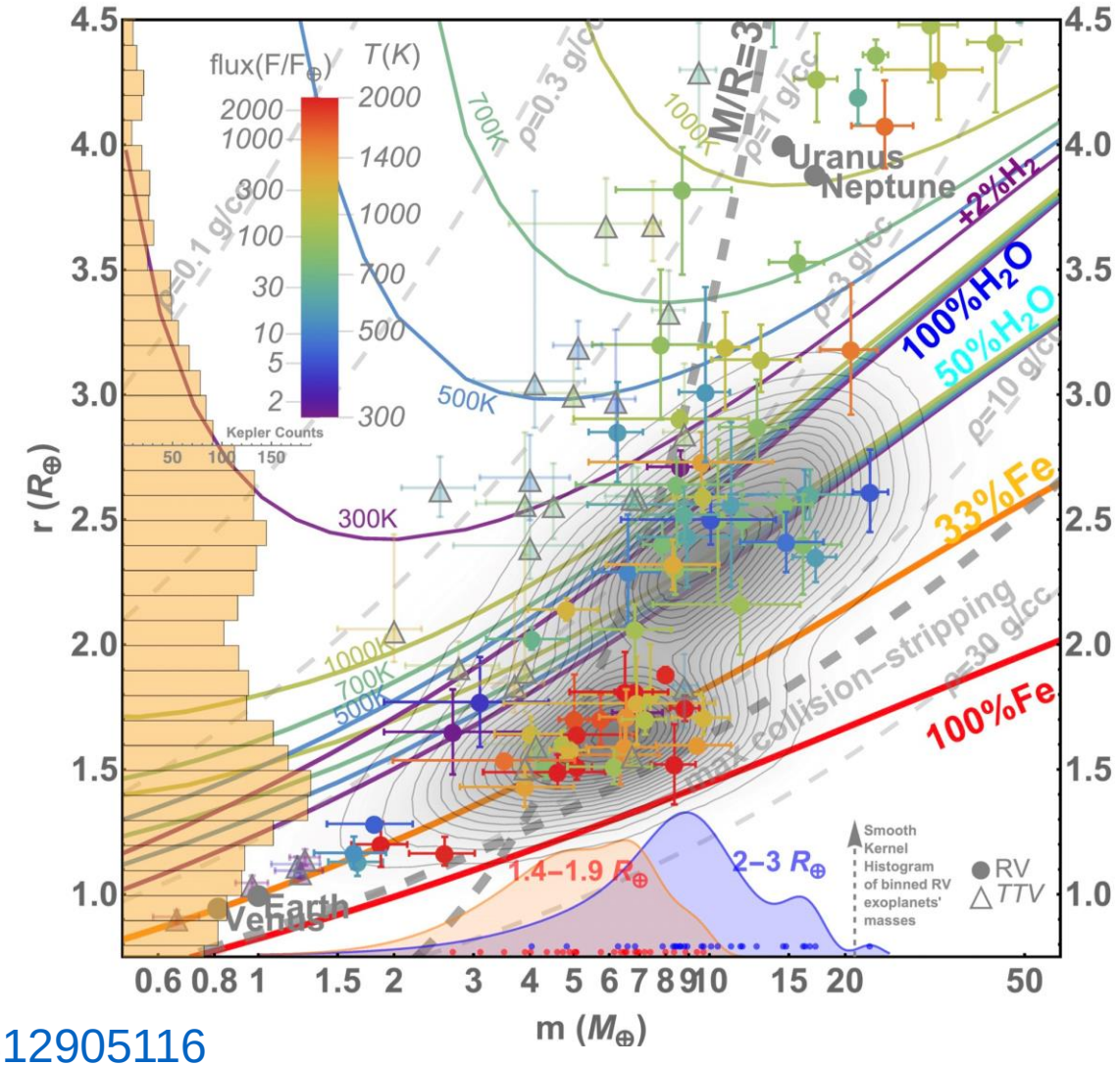


https://doi.org/10.1073/pnas.1812905116

Preparation: what next?

You’ve prepared your talk. What should you do next?

Preparation: what next?

You’ve prepared your talk. What should you do next?

Preparation: what next?

You’ve prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

Preparation: what next?

You’ve prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

Do as much as **you** think is necessary.

Preparation: what next?

You’ve prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

Do as much as **you** think is necessary.

Find **your** style.

Preparation: what next?

You've prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

Do as much as **you** think is necessary.

Find **your** style.

Just before…

Preparation: what next?

You've prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

Do as much as **you** think is necessary.

Find **your** style.

Just before…

Ensure you have water/drink.

Preparation: what next?

You've prepared your talk. What should you do next?

Rehearsal

Practice, practice, practice!

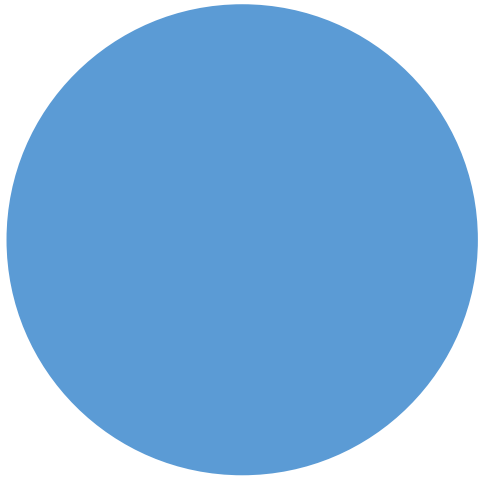
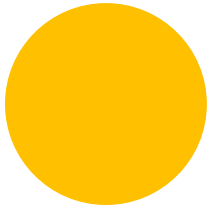
Do as much as **you** think is necessary.

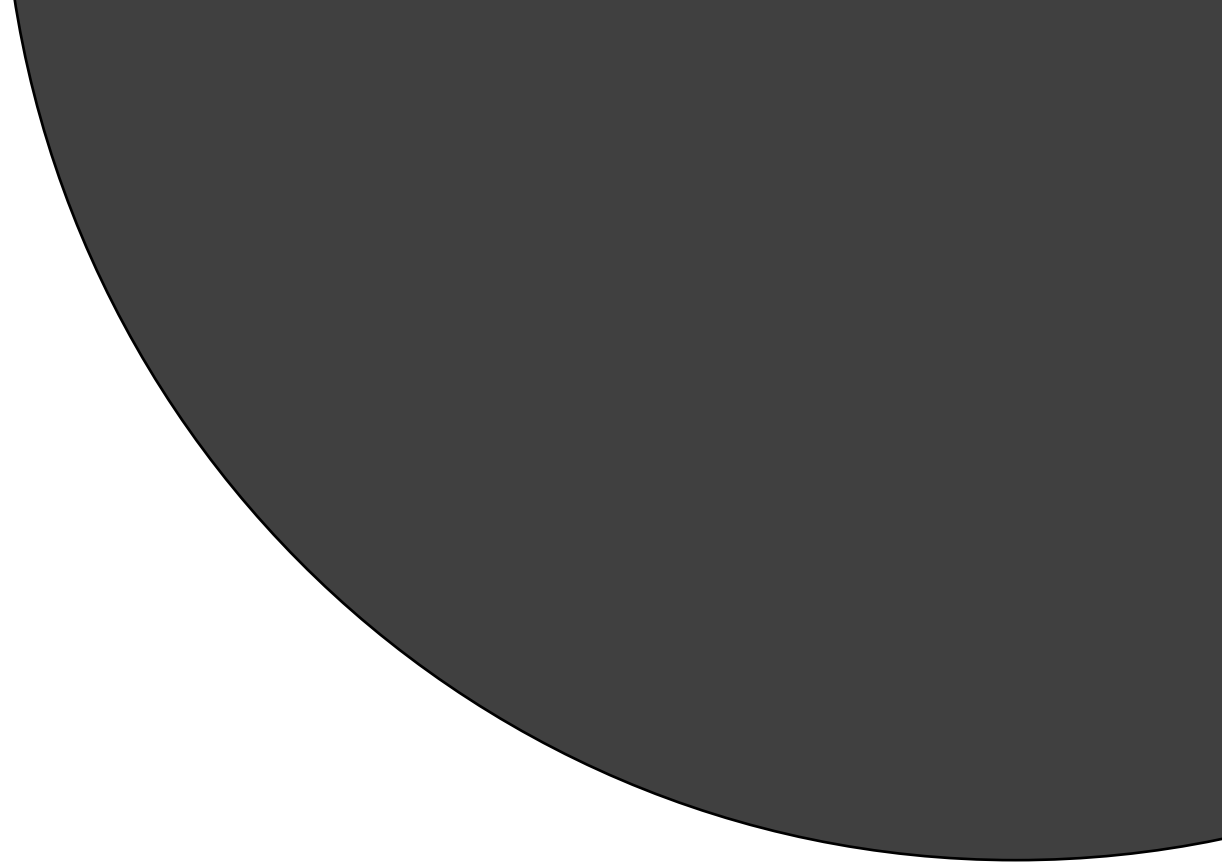
Find **your** style.

Just before…

Ensure you have water/drink.

If possible, use your voice/move jaw before hand.



Presenting

Presenting

Presenting

Presenting

Keeping to time

Questions

Presenting

Keeping to time

Be interested

Questions

Presenting

Keeping to time

Be interested

Questions

INSTRUCTION 1

Say your fact as if you are bored.

Presenting

Keeping to time

Be interested

Questions

Presenting

Keeping to time

Be interested

Questions

INSTRUCTION 1

Say your fact as if you are bored.

Presenting

Keeping to time

Be interested

Questions

Presenting

Keeping to time

Be interested

Questions

INSTRUCTION 2

Say your fact as if it is the most exciting fact and one that everyone should know.

Presenting

Keeping to time

Be interested

Questions

Presenting

Keeping to time

Be interested

Questions

INSTRUCTION 2

Say your fact as if it is the most exciting fact and one that everyone should know.

Presenting

Keeping to time

Be interested

Questions

Presenting

Keeping to time

Be interested

Questions

Audience Participation

Presenting

Keeping to time

Be interested

Questions

Audience Participation

Ask questions.

Presenting

Keeping to time

Be interested

Questions

Audience Participation

- Ask questions.
- Try polls (online).

Presenting

Keeping to time

Be interested

Questions

Audience Participation

- Ask questions.
- Other forms.
- Try polls (online).

Presenting

Keeping to time

Be interested

Questions

Audience Participation

- Ask questions.
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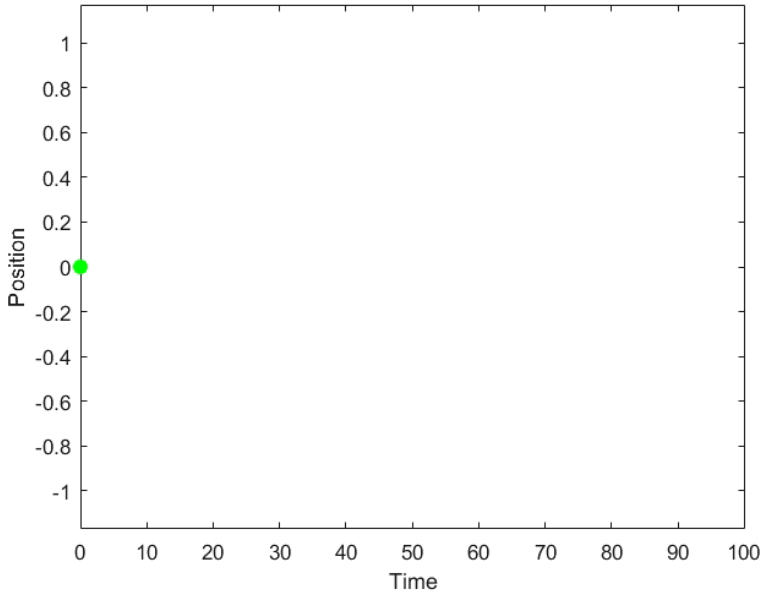

Presenting

Keeping to time

Be interested

Questions

Audience Participation

- Ask questions.
- Other forms.
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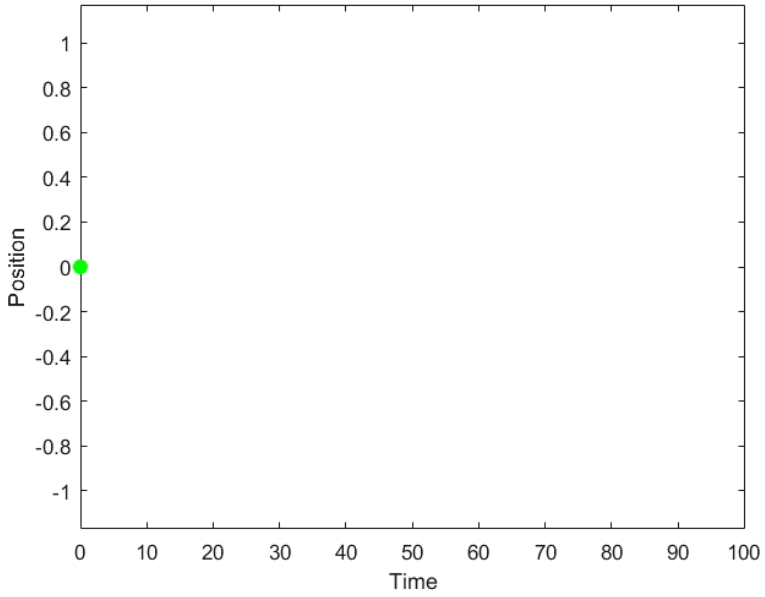


Reflection

After the presentation: reflection

After the presentation: reflection

How did it go?

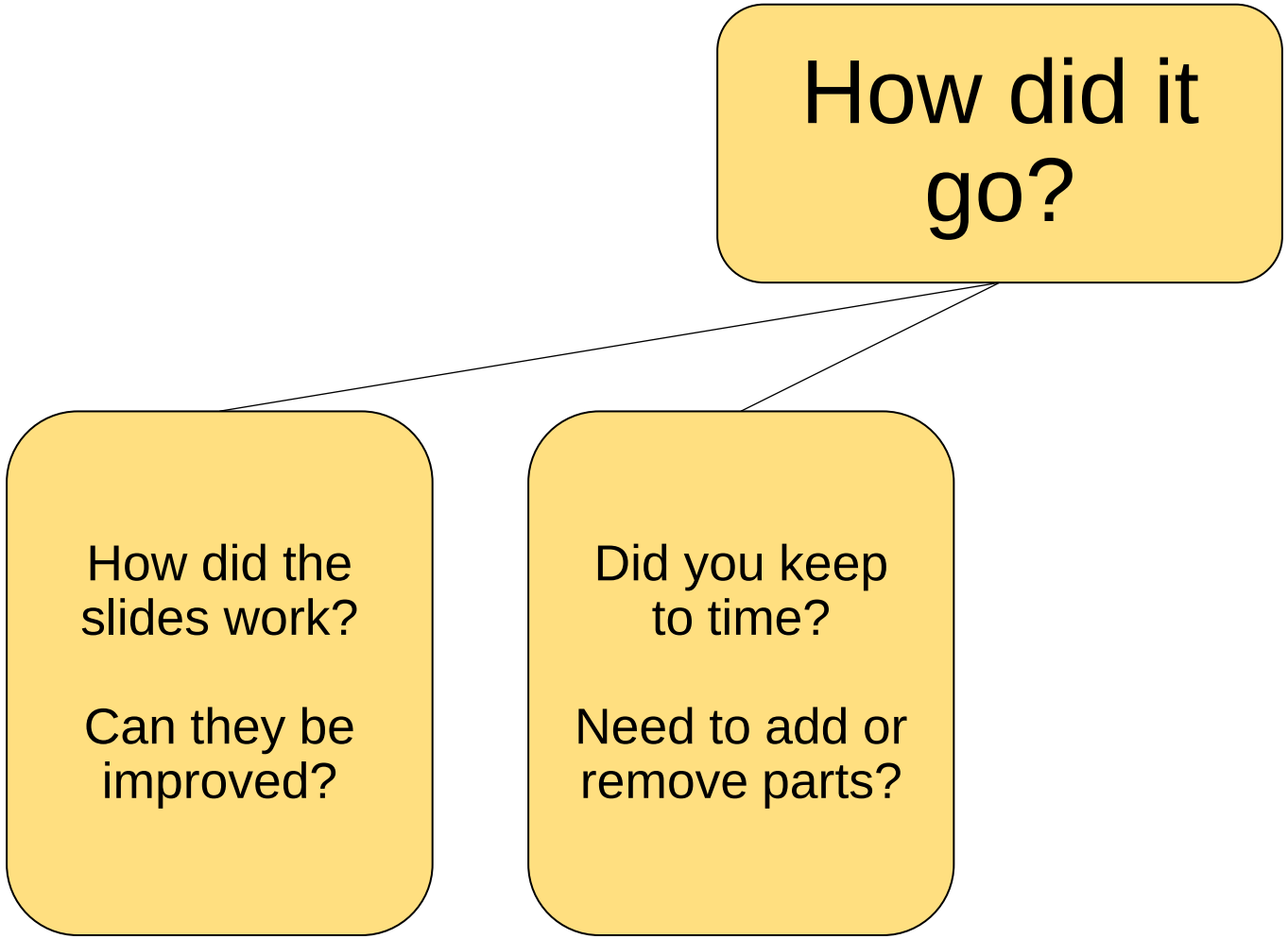
After the presentation: reflection

How did it go?

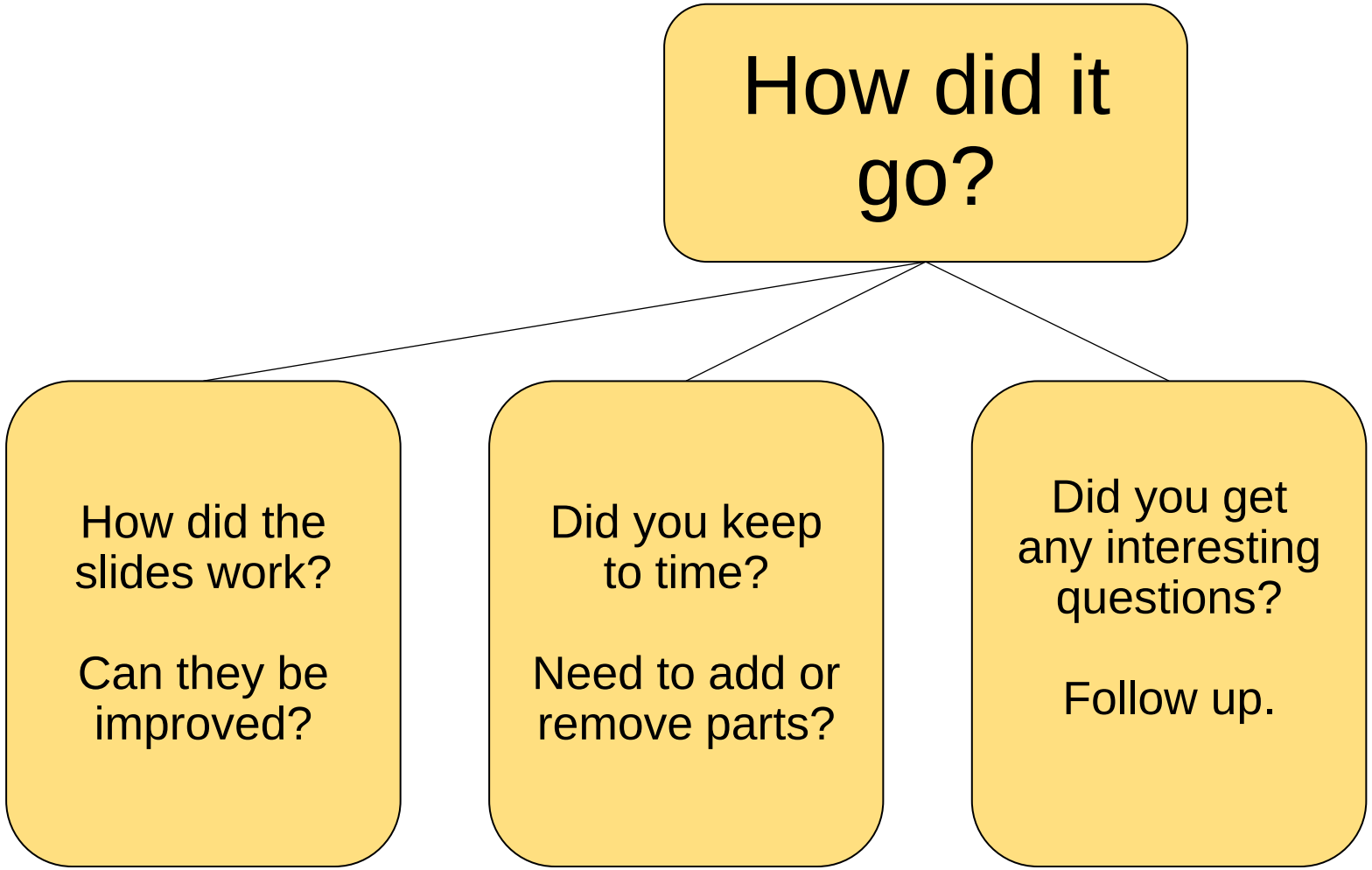
How did the slides work?

Can they be improved?

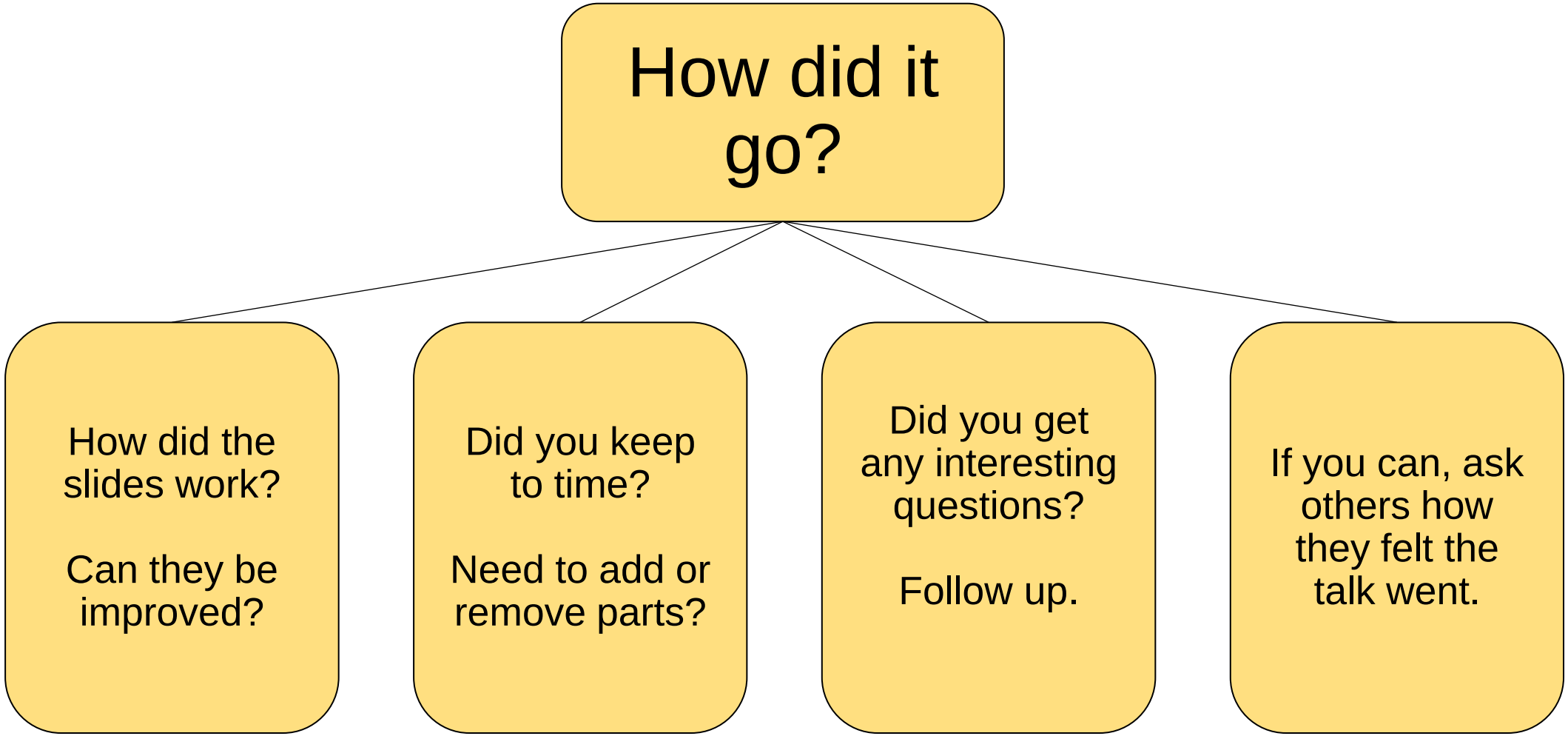
After the presentation: reflection



After the presentation: reflection



After the presentation: reflection



After the presentation: organisation

After the presentation: organisation

After the presentation: organisation

After the presentation: organisation

After the presentation: organisation

Ensure you know where slides are stored!

Extras

Final slides

Final slides

Conclusions slide

Final slides

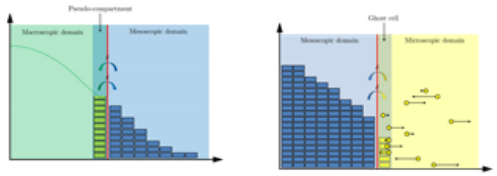
Conclusio slide

Conclusions

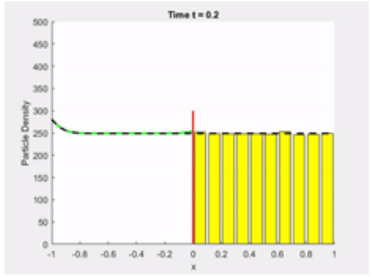
Reaction-diffusion systems have many representations – each with associated advantages and disadvantages.

Scale	Advantages	Disadvantages
Macroscopic (Mean-field)	Fast to compute solutions. Suitable for high copy numbers. Amenable to analysis.	Inaccurate for low particle numbers. Mean-field dynamics diverge from individual-level behaviour for high-order reactions.
Mesoscopic (Compartments)	Fast for low copy numbers. Represents the individual-level behaviour.	Can be slow for large copy numbers. Does not retain precise locations of particles or particle identity.
Microscopic (Brownian-based)	Most accurate representation of the three. Can be used for low copy numbers.	Slow to compute reactions. Impractical for large numbers of particles.

Spatially extended hybrid methods try to complement the strengths and negate the weaknesses of these representations.



The ARM is a new macroscopic-to-microscopic method for simulating reaction-diffusion systems.



Final slides

Conclusions slide

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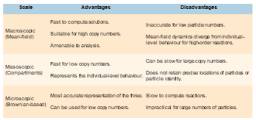

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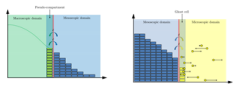

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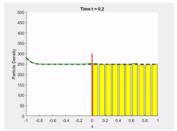

Final slides

Conclusions slide

References slide

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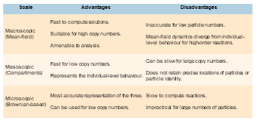

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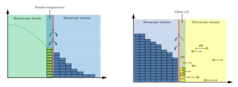
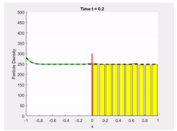


The ARM is a new macroscopic-to-microscopic method for simulating reaction-diffusion systems.



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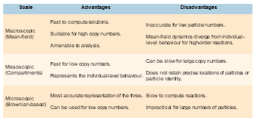

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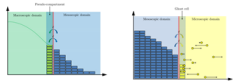

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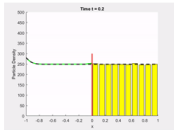

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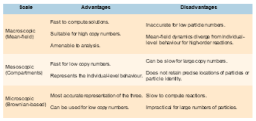

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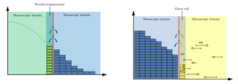

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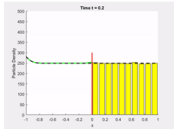

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Thank you for your attention

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Conclusions slide

References slide

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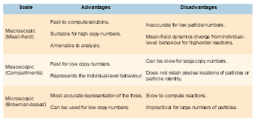

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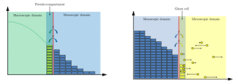

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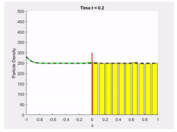

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Extra slides?

Extra slides?

What?

Extra slides?

What?

Why?

Extra slides?

What?

Why?

When?

Extra slides?

What?

Slides after the final slide with extra information:

> Content you don’t have time for.
> Further detail on some concepts.
> Extra results.
> etc.

Why?

When?

Extra slides?

What?

Slides after the final slide with extra information:

> Content you don’t have time for.
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> etc.

Why?

Can add to any set of slides, however natural to add when:

> Slides need to be removed through practice.
> Extra results can be easily added.

When?

Extra slides?

What?

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Why?

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> Extra results can be easily added.

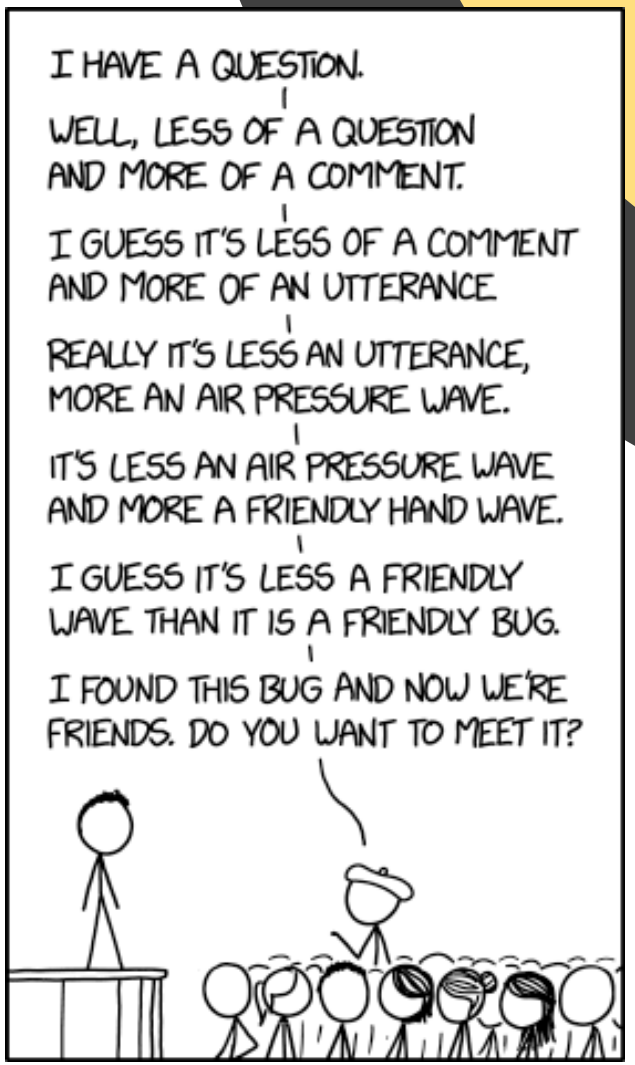
When?

Two scenarios when such slides are useful:

> You have extra time and can talk about extra material, **or**
> Help answering questions.

Thank you for your attention

If you have any questions/points of discussion, then please ask them!



xkcd 2191: Conference question

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