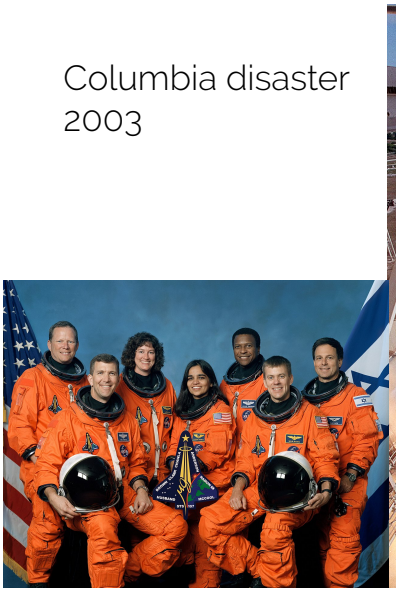
Handouts

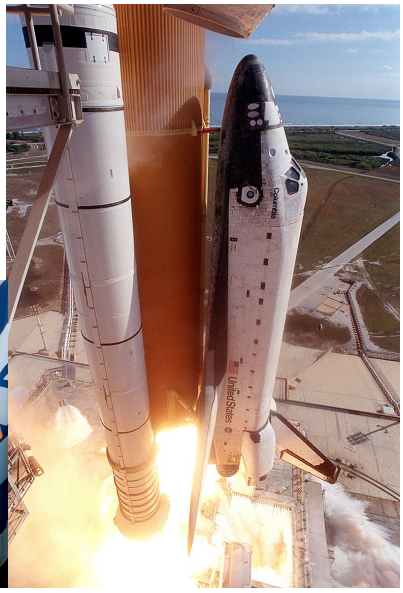
Inspiring others: prepare and deliver the best presentation of your life... every time

In this document you will find the slides and notes of the training: **Inspiring others: prepare and deliver the best presentation of your life... every time**. We regularly publish videos and posts on various topics revolving around effective scientific communication on our blog (for example, you can download a LaTeX template to produce handouts like the ones you are reading, but based on your presentations here). You can also subscribe for updates on our posts and on future trainings and follow us on facebook, LinkedIn and YouTube.

Inspiring others:
Prepare and deliver the best presentation of your life... every time

Columbia disaster 2003





Edward Tufte has traced back one of the issues of the Columbia disaster: Boeing consultants failed to deliver the conclusions of their investigations through their presentations. While their main message was that more research was required to assess the damage to Columbia, NASA directors understood that the damage was not significant. The Columbia space shuttle ended up burning down during atmospheric re-entry, and the full crew died.

How to plan, design, and deliver the best presentation of your life

day 1	Effective structure
	Brainstorm your ideas
	3' exercise, preparation 10' presentation
day 2	Design of effective slides
	Stage presence
	Attention getter and closing
day 3	10' presentation exercise

To ensure that you manage to get your message across in your future presentations; in this course we introduce you to the fundamental principles of effective scientific communication. We first focus on the structure; then on designing effective slides, stage presence, attention getter and closing. Finally you get to put everything into practice in the last half day with a 10' presentation.

Like presentations, feedback is better delivered when efficient

No judgement	~~The way you stand is not good~~
Consequences	Your movements can be distracting
No interpretation	~~You did not prepare enough~~
Focus on facts	I saw no connection between your main points
No reproach	~~You should have used another colour than green~~
Suggestion	Next time, you might try another colour than green.

Part of the important skills to continue learning on effective presentations after this training is the observation of others. By giving feedback to others you also organise these thoughts and develop your expertise.

Effective communication is getting the message across

It implies someone else:
the audience

understands the message

remembers it
is convinced of it
acts on the basis of it

The primary objective to keep in mind when planning, designing, and delivering your presentations is to **get your message(s) across**.

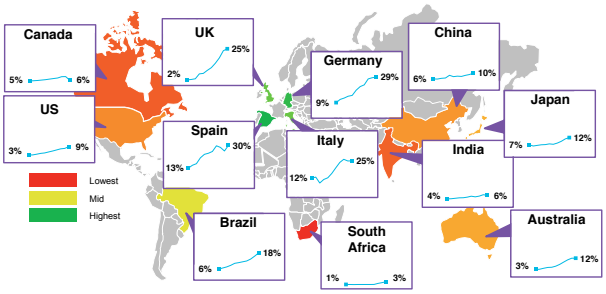
A message presents intelligent added value

Information —Interpretation→ Message

What? So what?

Thus, you need to be able to identify your messages and differentiate them from information. A message provides intelligent added value to information. It involves interpreting the information for a specific audience and a specific purpose. It answers to "so what?" (or what is so important about this piece of information) instead of "what" (what this piece of information is).

Renewable energy proportion of power generation, 2006-16



Example of a slide with information, not messages. There are many different possible messages that the presenter could be giving us with this image, but what (s)he wanted to tell us is not explicitly written here, there is only information.

Effective communication is optimisation under constraints

Get your audience to

pay attention to

understand

be able to act upon

a maximum of messages given constraints

You want the audience to do something with your message, given **the constraints** of the situation: some of them you can anticipate, others will be out of your control.

The three laws for effective scientific communication

1 Adapt to your audience

2 Maximise the signal-to-noise ratio

3 Use effective redundancy

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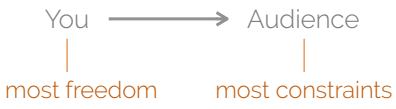


It is your responsibility as a presenter to adapt to your audience, to think of their situation and possible limitations so that they can **understand** your message.

The three laws for effective scientific communication

1 Adapt to your audience

2 Maximise the signal-to-noise ratio

3 Use effective redundancy

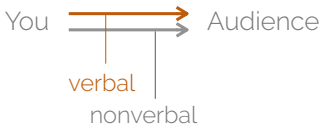
Anything that comes between you, your messages, and the audience is considered noise. Whatever does not directly contribute to your message is noise.

The three laws for effective scientific communication

1 Adapt to your audience

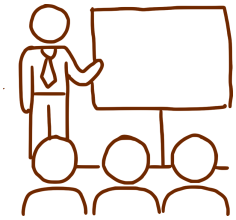
2 Maximise the signal-to-noise ratio

3 Use effective redundancy



Effective redundancy is crucial in oral presentations. It can be applied through verbal/non-verbal communication, it should be incorporated in the structure and both the speech and the slides should be redundant.

5 steps for the best presentation of your life… every time



1 Organise your ideas

2 Find the message and structure

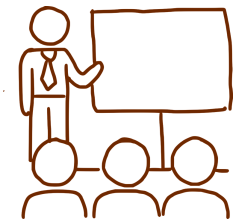
3 Design your slides

4 Deliver the presentation

5 Answer the questions

Starting with your next presentation, you can apply these five steps from the idea to D-day.

5 steps for the best presentation of your life… every time



1 Organise your ideas

2 Find the message and structure

3 Design your slides

4 Deliver the presentation

5 Answer the questions

Prepare a small presentation (3min)
without slides

Learning objective:
- Brainstorm
- Structure

Organise your ideas
by replying to these questions

Why	Purpose
Who	Audience
What	Content
When	Time constraints
Where	Space constraints

In the first step, we will use a piece of paper (you can also use a digital piece of paper like one of my favourite softwares Evernote) to answer these questions.

Organise your ideas
with efficient brainstorm

David Allen's technique

What is the best way to plan?
The master planner is in all of us

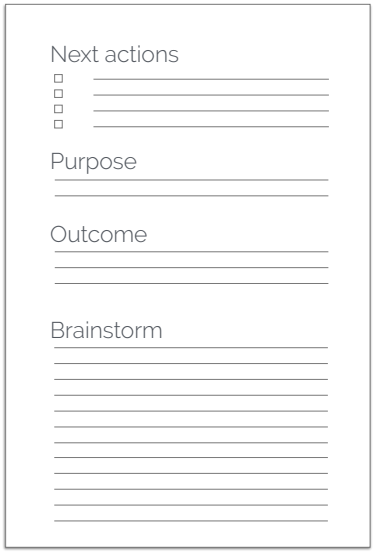
There are things our brain is not very good at,
but there are others it can brilliantly do, planning

Organise your ideas
with efficient brainstorm

1. Defining purpose and principles
2. Outcome visioning
3. Brainstorming
4. Organising
5. Identifying next actions

The following steps are explained in details by David Allen in the following video.

5. at the end but on top
1. why you are doing this project
2. how a positive outcome look like
3. jot ideas without judging or organising
4. identify significant pieces, add details (organise)



Starting with the purpose, try to answer the question "why". Then after visioning the positive outcome of your project/work/presentation (this is of course applicable to many aspects of your life), your brain will start having thoughts on different aspects. At this stage, it is important **not** to judge or organise these thoughts. When the flow of ideas decreases, you can start organising, which will probably lead to other ideas. At the end, write on top of your page what will be the next action to move this project forward. More details here.

Prepare a small presentation (3min)
without slides

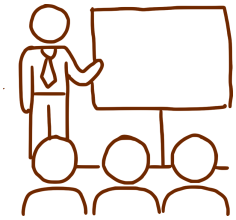
Learning objective:
- Brainstorm
- Structure

3 min presentation in group

How is the presentation structured?
What did you like?
What would you do differently?

Learning objective:
- Oral expression
- Observation-Feedback

5 steps for the best presentation of your life… every time



1. Organise your ideas
2. Find the message and structure
3. Design your slides
4. Deliver the presentation
5. Answer the questions

Oral presentations convey one main message

Main message	The sentence that the audience should remember
	Stated early in the presentation
	Identified early in the preparation

Oral presentations have three main parts

1 Opening

2 Body

3 Closing

Oral presentations have three main parts

Opening	Attention getter Need Task Main message
Body	Supporting messages
Closing	Conclusion Close

An effective structure makes use of effective redundancy

Attention getter
Need
Task
Main message

Preview

Supporting messages

Review

Conclusion
Close

The main structure of an effective presentation follows these steps. After an effective **attention getter** providing some context, the **need** to be addressed is introduced. Then the **task** describes what you did to tackle this need. You can finish the first part of the presentation by stating your **main message**. In the **preview** you just outline your upcoming **supporting messages**, which explain the main message or give details to the **body** of your talk. Just before the **conclusion**, **review** the main points and then **close** efficiently, for example by trying to loop back to the attention getter.

Each element has its own focus

Audience
- Attention getter
- Need

You
- Task
- Main message

Preview

Supporting messages

Review

Audience
- Conclusion
- Close

The focus starts with the **audience** in the attention getter and the need. Then it shifts to **you** with the task. At the end, you come back to the audience with the **conclusion** and the **close**.

Prepare the structure of your 10 min presentation and then discuss with the group

Try filling in the structure seen before. At this stage use one piece of paper (or one post-it), per message . Then it is easy to organise your talk. Don't go on your computer yet.

Learning objective:
- Structure
- Observation-Feedback

Find your message
and the supporting elements

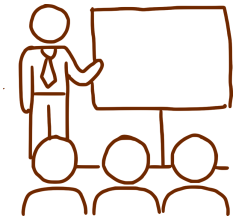
Develop the storyboard of your presentation

Focus on the messages not the design

Sketch with paper and pen (or anything else than ppt)

Organise

5 steps for the best presentation of your life… every time



1 Organise your ideas

2 Find the message and structure

3 Design your slides

4 Deliver the presentation

5 Answer the questions

The laws of communication should always drive your choices

Adapt to your audience
Ask the organiser and
check who presents in your session

Maximize signal to noise ratio
Remove anything that is not the message

Use effective redundancy
You could understand without looking
or without listening

The three laws of communication also apply to designing your slides (and to preparing any other document: a paper, report…).

Design your slides right or don't do them at all

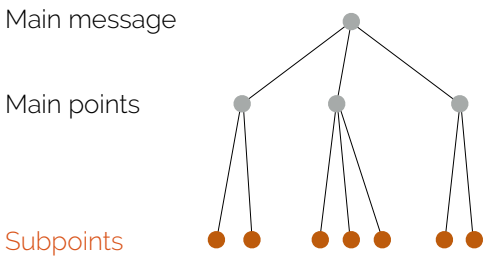
Slides are for conveying messages
the same ones as the speech

Slides should stand on their own
but they need not include all the speech

Slides are a choice
a presentation can be effective without them

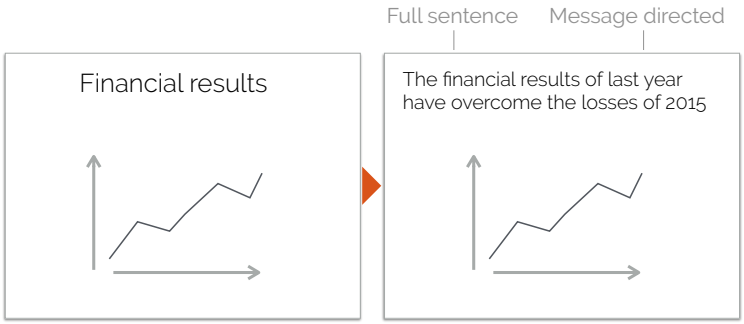
If limited in time, you better focus on rehearsal than on producing slides. Keeping this in mind, and knowing that we always wrestle with our agenda, plan enough time for rehearsal. As a rule of thumb, I rehearse at least three times the full presentation (in front of an audience or recording myself).t Slides need to be redundant and self-explanatory but that doesn't mean that everything that you is written on the slide itself: your spoken text will certainly be richer than what's written on your slides.

One message per slide conveying your subpoints



Create your slides only after thinking about your structure: first determine your main message, main points and the subpoints required to develop them. Each slide conveys **only one message**, which corresponds to the each on of the subpoints of your presentation. These messages should go in a prominent position: the slide title Start drafting **by hand (not with powerpoint)** how your presentation will look like: the messages (titles) of each one of your slides and the elements that you will use to support them. By forcing yourself to start drafting by hand and not on your computer you will make sure you focus on the messages (and don't get lost with all the design features of your slides) and will eventually save a lot of time.

Break the habit of "what" title and replace by "so what"



This is an illustration of the fundamental difference between the "what" and the "so what". How many slides like the one on the left have you seen? The one on the right interprets the information so that your audience knows what your message is.

The major noise of slides is usually too much text

Speakers create slides for themselves
Cryptic and text heavy

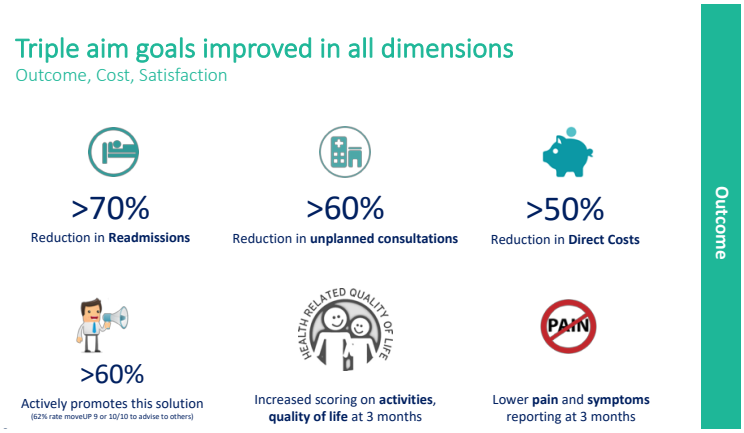
Speakers create slides as handouts
In a drive towards efficiency,
but being two times ineffective

Speakers copy from written documents
Graphs and statements need to be adapted for an oral presentation

When you ask people what's the main problem of slides in general, their answer is: too much text. When these people design slides themselves, they very likely end up with too much text too. Why? For these three reasons mostly. Slides should never be a guide for the speaker, they are meant **for the audience**. Don't use slides as a way of avoiding rehearsal. Slides are also not handouts: if you try to design them as such you will end up with too cluttered slides which are also ineffective as handouts for being too light for this purpose. Prepare handouts as a separate document, such as the one you are reading. Finally, slides should not copy full paragraphs or sentences from written documents: they are a different means of communication and require its own preparation.

Non message oriented designs distract from the content

Sometimes we want to keep the audience's attention by introducing visual effects. In practice, these are noise and people might end up remembering you for the animations you used but not the message of your presentation.



Icons are very trendy now, people tend to believe that their presentations are more appealing and 'professional' with them. Thus, they end up forcing certain icons to represent categories that mostly end up looking artificial and distracting the audience from the message.

Brains perceive differences keep them where it matters

Avoid non useful differences between slides

Keeping your slides simple helps spotting differences

Replace the necessary animations by multiple slides with differences

Use differences in slides to highlight. Keep your items consistent not to distract the audience. For example: use same font size and type across the presentation, keep all slide titles in exactly the same position and use guidelines to make sure that your text is always aligned to the same horizontal position.

Keep your lists with max 5 items and ideally 3

Brains have difficulties capturing more than 5 elements

It is most comfortable when limiting to 3

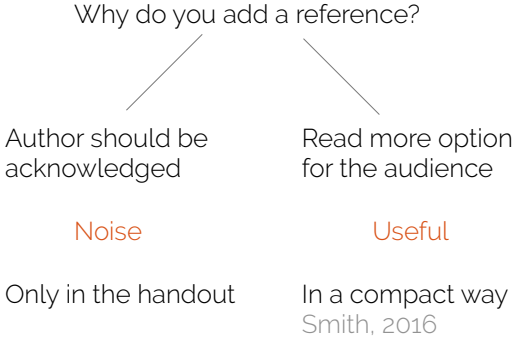
When more items, group them

To be convinced, try to show a list of more than 5 items to an audience, you will see their face changing and it'll be obvious that they are struggling.

Our brain cannot directly see how many point are displayed here.

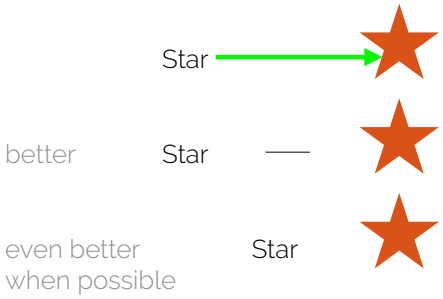
By grouping the points, their total number is directly obvious to us.

References can be useful but can also be noise



Presentations are not articles. If you need to acknowledge the work of someone, of course do it, but in the handout.

Take advantage of space and let it enter your slide



Don't hesitate to leave space on your slide. As silence will be to your speech, space is a powerful tool.

Fonts are important but don't overthink them

Avoid the common issues:

no serif

should be readable

not overrated

Keep the same font for all the slides

Careful with equations

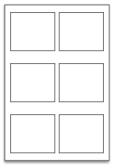
Once you have settled for a specific font, use it throughout your presentation: don't change it. Avoid the common pitfall by using a clear font without serif—which is easier to read from a projector and looks cleaner. Pay attention to the font used in equations.

Size often matters

Too big uses too much space

Too small is difficult to read

Tip: print your slides 6 per A4
it should still be readable

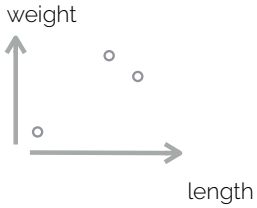


Whatever cannot be properly read in a slide becomes noise for the audience. Use this tip to make sure that your items are not too small. Pay special attention to tick marks and axis titles of your graphs: be aware that graphs need to be adapted for a presentation most of the time to make sure that they are readable and clear.

Use table for overview, graphs for connections and trends

Same data, two different messages

	weight (kg)	length (m)
P1	21	10
P2	18	12
P3	10	5



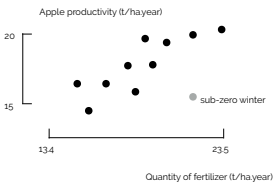
There is an intrinsic difference between a table and a graph. The table will provide an overview of some data without direct link. The graph is used to emphasise a trend. Too long tables do not belong to presentations though, as it will be difficult for your audience to interpret them. Whenever you present a table or a graph, drive your audience through it and explain the different elements to make sure you keep the attention.

To make your graphs effective reveal what they have to say

Bar charts reveal comparison (use horizontal for clarity)

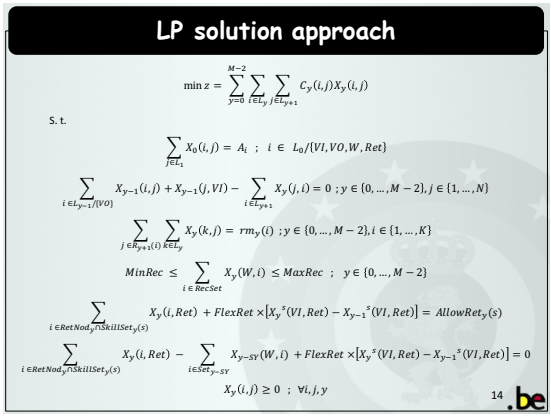
Lines reveal evolution

To make your graphs effective reveal what they have to say



Points displayed on two scale to explore correlation

Present equations as a block diagram



If you're attending a presentation and such slide appears: would you try to follow and understand these equations? Or rather 'switch off' and stop paying attention?

Present equations as a block diagram

Only include equations to support the message

No need to be exhaustive

Weber number at injection

$$We_{inj} = \frac{m \; v_0 \; d_0}{V \; s}$$

mass · injection velocity · injection diameter · volume · surface tension

When using equations in your presentations, help your audience by placing the information where they need to see it.

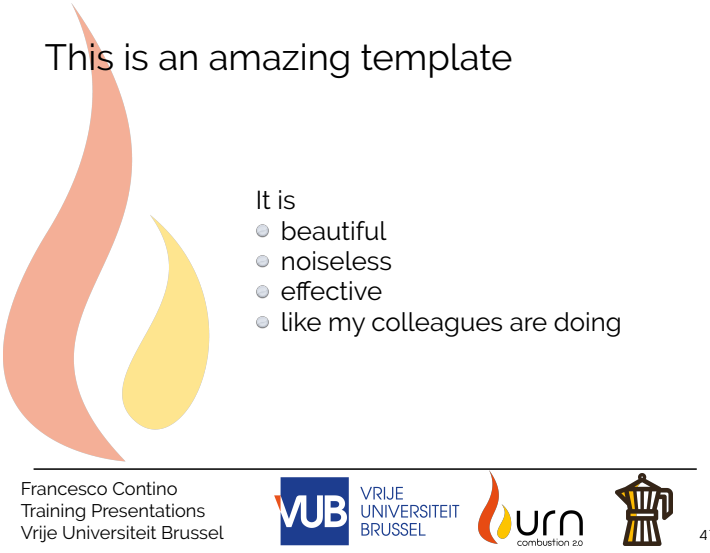
Only when absolutely necessary indicate page and structure

Black region to extract it from slide content

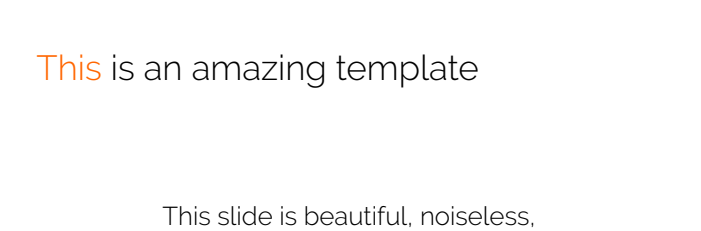
(optional) can be used to convey the structure

No mention of total number of slides

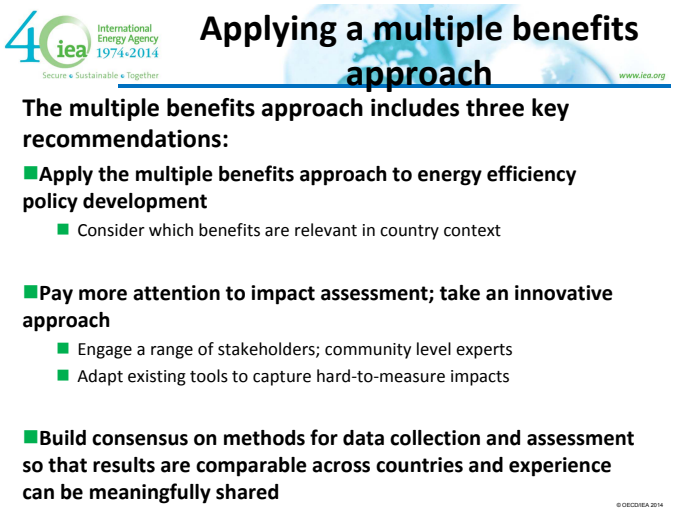
When the structure and/or the page number need to be provided (we suggest you try without them most of the time), you can apply this trick. Beware that you are losing space though.



Are templates really necessary or do they just add noise to your presentation? Will the audience more likely remember you (and your message) for having a logo repeated all over your slides or for giving a clear, noiseless, well structured and well delivered presentation?



The best template is **always** a blank slide that gives priority to the message and minimises noise.



Example of a rather noisy slide.

The multiple benefits approach includes three key recommendations

- **Apply the multiple benefits approach to energy efficiency policy development**
  - Consider which benefits are relevant in country context
- **Pay more attention to impact assessment; take an innovative approach**
  - Engage a range of stakeholders; community level experts
  - Adapt existing tools to capture hard-to-measure impacts
- **Build consensus on methods for data collection and assessment so that results are comparable across countries and experience can be meaningfully shared**

To improve: remove noisy elements and place the message as slide title.

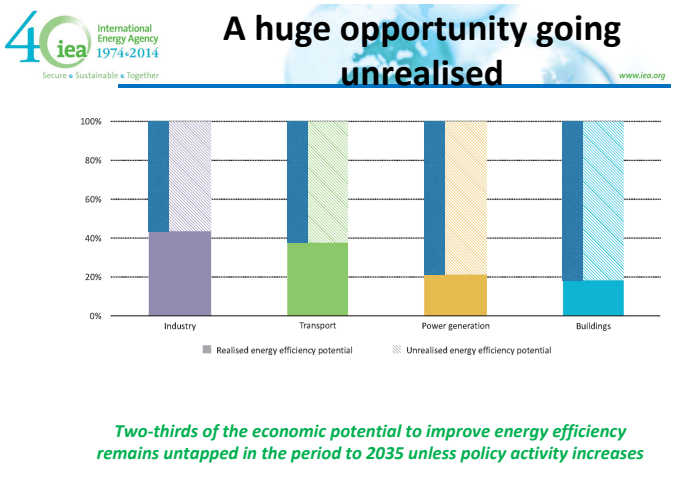
The multiple benefits approach includes three key recommendations

Apply it to energy efficiency policy development
Consider relevant elements in the country's context

Pay more attention to impact assessment
Engage a range of stakeholders
Adapt existing tools to capture hard-to-measure impacts

Agree on data collection and assessment methods
Results are comparable across countries
Experience can be meaningfully shared

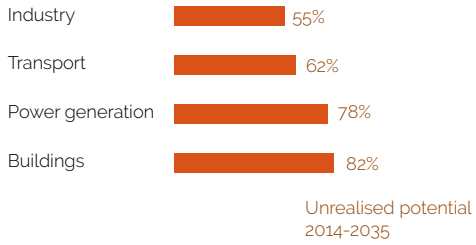
A possible improvement.



Two-thirds of the economic potential to improve energy efficiency remains untapped in the period to 2035 unless policy activity increases

Another improvable example.

Two thirds of the economic potential linked to energy efficiency remain untapped



Remove legends in graphs to avoid having to read the graph in two steps. Horizontal bars make it easier to display categories. Limit colours to avoid noise.

Take your difficult slide and find a way to change it

Learning objective:
Design of slide

Have a strong beginning and a clear end

Audience
- Attention getter
- Need

You
- Task
- Main message

Preview

Supporting messages

Review

Audience
- Conclusion
- Close

Have a strong beginning and a clear end

A strong beginning and
you are off on the right foot

Respect by making your talk interesting
not by thanking your audience

Clear end to avoid awkward silence

Avoid stating your name and title when you take the stand. All needed information should be on the first slide which should be displayed when presented by the chair(wo)man.
During rehearsal, try to take extra time to master the beginning of your presentation. This will kickstart your talk and help you go through the rush of stress that everybody gets at the beginning.
The end of the presentation should also be strong and clear. Avoid decreasing the level of your voice while saying something like "thank you for your attention, if you have any questions…" Test the following: loop with a reference to your attention getter or call for action from the audience and try very hard not to say thank you (like everybody else). This will force you to have a clear and nicer end.

Convey the structure when needed and only when it makes sense

Where is structure added?
When the public knows why it matters
to listen to you

What is needed in this structure?
Only what is not obvious
Forget intro and conclusion

Structure needed in all slides?
Generally no

A table of contents is better displayed when your audience understands why it is important that they pay attention to you. As a presentation is different from a book, don't use a table of contents the same way. Wait until after the main message (or together with it) and try to be concise. No need to add points like "introduction" or "conclusion", most of the presentations have these parts and always at the beginning and end, respectively.

Fight against usual misconceptions

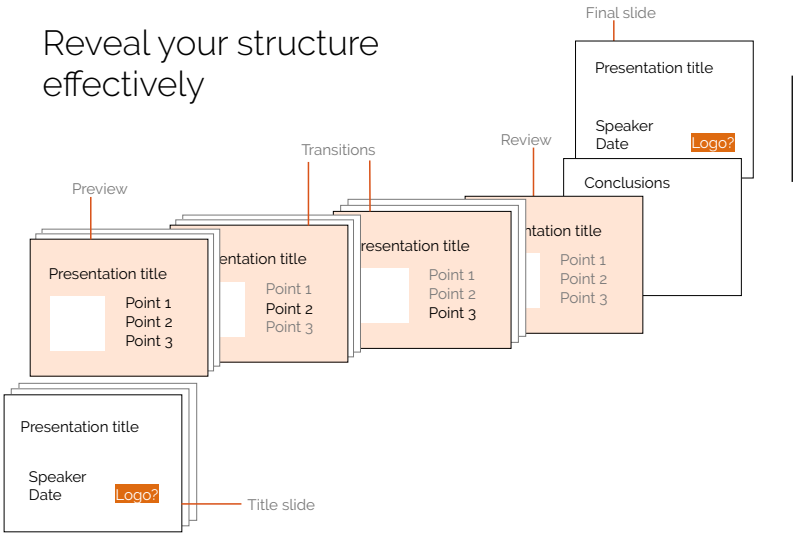
Don't use template for the sake of it

Same affiliation between first and last slide, remove the logos for all other slides

Science shouldn't be artificially complex simple is also impressive

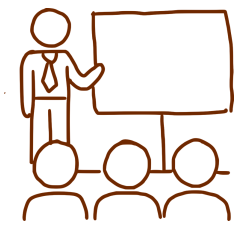
Asking three times why to your supervisor

Reveal your structure effectively



Use the same slide for your preview, review and transitions. You can have a distinctive image in it or even use a different background colour to differentiate it from the rest of your slides. When you change from one point to another, highlight it on your slides.

5 steps for the best presentation of your life… every time



1. Organise your ideas
2. Find the message and structure
3. Design your slides
4. Deliver the presentation
5. Answer the questions

Delivering the best presentation starts with a lot of rehearsal

Rehearse, rehearse, rehearse

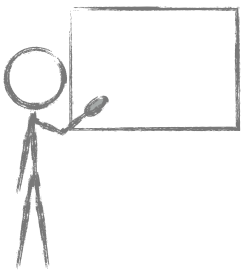
Ask colleagues or
record yourself

Use physical feedback

Pay attention and learn transitions

A physical feedback is best used only for rehearsal and can be a chair placed next to you to feel it when you move.
Ideally, you should know by heart what will be your next slide. No need to know your full presentation by heart though: it is unnatural and it can lead to a blank mind if you forget a piece. There might be specific sentences in your presentation, or transitions, that you might have troubles with and that are worth memorising.

Nervous is less trustworthy, a confident stance helps a lot



Ski boots to avoid nervous legs

Look at your public and
convey emotions with your face

Use hands deliberately
without noise

Be sincere

During rehearsal focus on your position and take the time to look in the eyes of your audience.

Timing is everything

Timing: 1 slide = 1minute (first approx.)

Generally faster in front of the audience

It should feel slow during rehearsal
to be at the right speed for the public

With time, less is always better

Time is an important constraint for a presentation. Measure it and keep it under control. Even if you rehearse, you could very well be overtime in some cases. When this happens, don't rush the rest of your presentation but rather skip some parts. You might get a chance to get back to them during the questions, while rushing and taking more time will most likely get your audience angry.

Remove all verbal noise and keep voice variation as a signal

You did it for your slides,
do it for your speech

Aim for effective redundancy

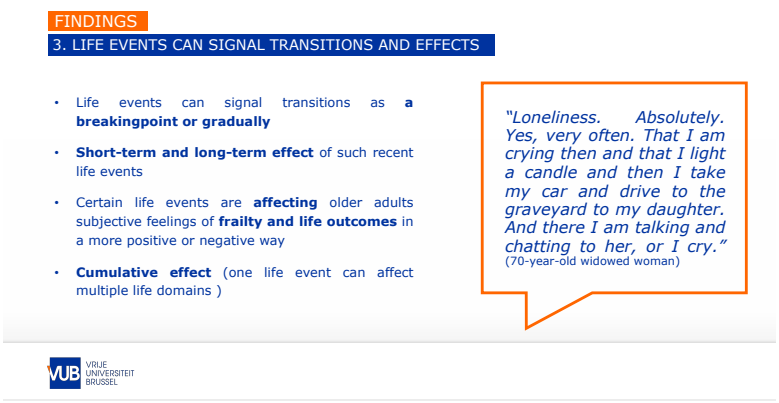
Adjust voice to situation and content

This is probably a good reason to record yourself. You will see the verbal noise or gestures you introduce while you talk. Pay attention to reduce them as much as possible. Once you know them, it will be much easier to avoid them.

When complexity is needed deal with it effectively

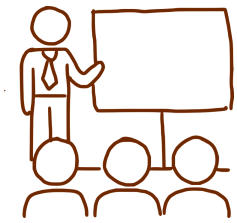
When a long piece of text is included
read it with the public

Complicated words:
know by heart or simplify



An example of a quote that might be relevant: when introduced, the speaker should read it out loud with the audience.

5 steps for the best presentation of your life… every time



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Take questions as opportunities to get time to talk again

Questions are a real opportunities to get feedback from your audience. Some might not have understood one of your messages and their questions give you the chance to get everybody on board. Moreover, it is also an opportunity to dig deeper in some aspects or to insist in some of your messages. Follow these steps to make sure you have a strong answer to the questions.

Listen wait until the end and make sure you understood

Repeat/rephrase if needed and address directly the person

Think to make a short and well constructed answer

Answer with a positive "yes and …" instead of a defensive "no but …"

Deal with aggressive questions as an expert in Ju-jitsu

Sometimes you will encounter aggressive questions. In these cases, stay calm and play the "surprised card". Avoid entering a debate in front of everybody else (most probably not interested) and offer to discuss the problem after the talk.

Stay calm and wait a little to produce a "loud silence"

Be surprised when you feel the attack is not justified

Understand the concern but if based on assumption, question it back

When not understanding, suggest to discuss it later

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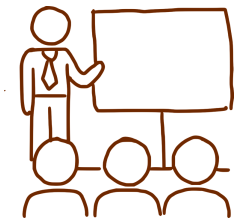

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Starting on the right foot sets you up for the rest

Use a short but effective attention getter so audience focuses on the need.

Make a link with what your audience is interested in.

Don't start with: "Hello. My name is…"
This is self-centered. Audience first.

15' Prepare your attention getter alone

15-30' Test it on the group
remind what is the topic afterwards

Feedback:
Did you get the link with the message?
What would you suggest to improve?

Learning objectives:
- Get a strong beginning
- Observation-Feedback

A strong closing gives you an edge for the interview

Indicate clearly that you have finished.

Avoid the traditional thank you
make it elegant instead.

Prepare your audience for the end
and loop back to your attention getter.

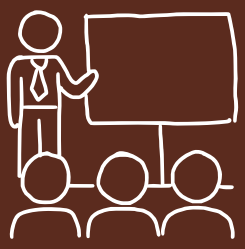
15' Prepare your close alone

15-30' Test it on the group

Feedback:
Did you get the link with the message?
What would you suggest to improve?

Learning objectives:
Get a strong close
Observation-Feedback

Inspiring others:
Prepare and deliver the best presentation of your life… every time



Francesco Contino
Marina Montero Carrero

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