

HOW I PREPARED MY ADVANCED ERC APPLICATION



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VIDEO HOLOGRAPHY
JAN GENOE, ERC-ADG (2016)



OUTLINE

- Upfront: major questions
 - Vision 2030
 - Why now?
 - Why me?
- Talking with people: getting buy-in
- Sharpening the **ground breaking innovation**
- Looking for the 10x
- Making the proposal more sexy



VISION 2030



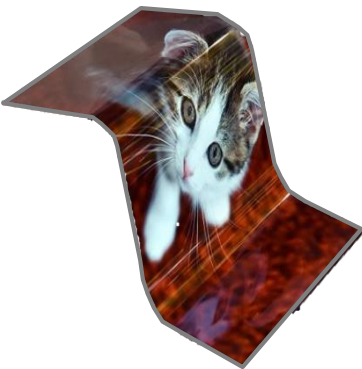
Rigid flat

2000



Curved

2010



Foldable display 'disappears'

2020



Augmented reality

2025



Display "free" 3D

2030



VISION 2030

- Define your target !
- be super-ambitious

but

- be convincing that this is the right time to get it done
- be convincing that it can be done by you (as PI)



WHY NOW?

- Gabor [1] already stated in 1948 that 10000 lines/mm (i.e. 100 nm) resolution would be needed to have high-quality holograms.
- Static and slowly rewritable holograms can already be made for decades.
- Video holography requires the control of the phase of the light at high speed.
- This requires a silicon technology with a 10 nm technology
- This is **now** in reach



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WHY ME?

- I have no background in holography.
- Scientific track record on device physics, fundamental physics and system level design.
- Patents and papers in the field of displays and 3D displays (using μ -lenses).
- Lots of experience in conductive oxides which is labelled as the “**breakthrough innovation**” in the proposal.
- So check: does your background match the ambition of the proposal?

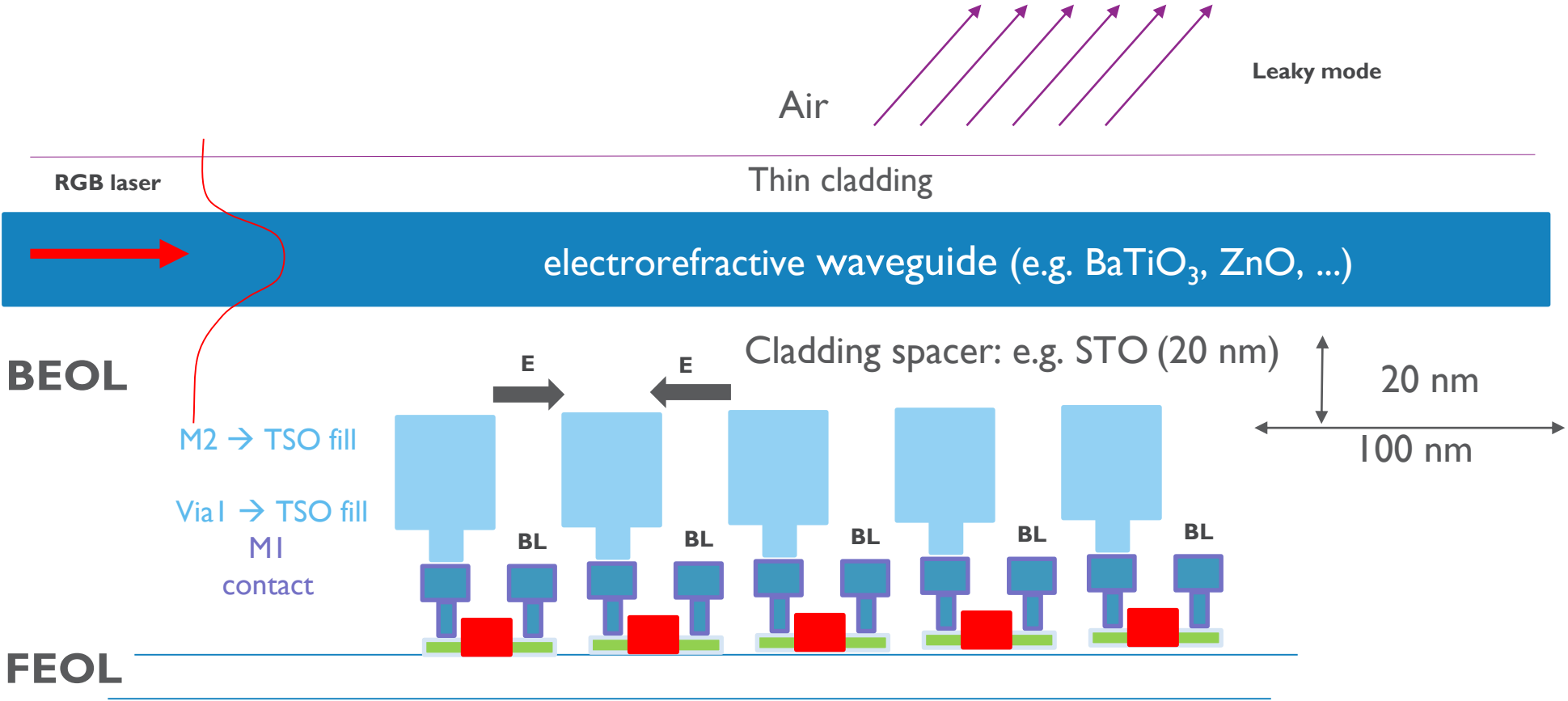


TAKING TO PEOPLE BASED ON A CONCEPT POWERPOINT

- I took 14 days to talk with a lot of people on the concept, in a “confidential” Face to Face.
- I took notes from their impressions and feedback
 - This is utterly useful to improve
 - Consider them as reviewers before submission....
- I asked the administration very early to do budget calculations



YOU NEED A GROUND BREAKING INNOVATION



LOOKING FOR THE 10X

- Define carefully where you will realize major progress beyond state-of-the-art
 - 10X is needed, much more than a classical research project
- By definition, there should be important risks in your proposal
 - do not avoid the risks: define them and mitigate them



MAKING THE PROPOSAL MORE SEXY

- The last weeks before the deadline, I was frequently rewriting the proposal.
- A first draft was already uploaded online.
- My day usually started by thinking about how to make a figure more convincing
 - reworking the figures
 - reworking subsequently the corresponding text
- Good enough is not an option, it needs to be perfect.



CONCLUSION

- Start in time with all preparation
- It is a lot of work
- But: It is definitely worth it, so go for it

