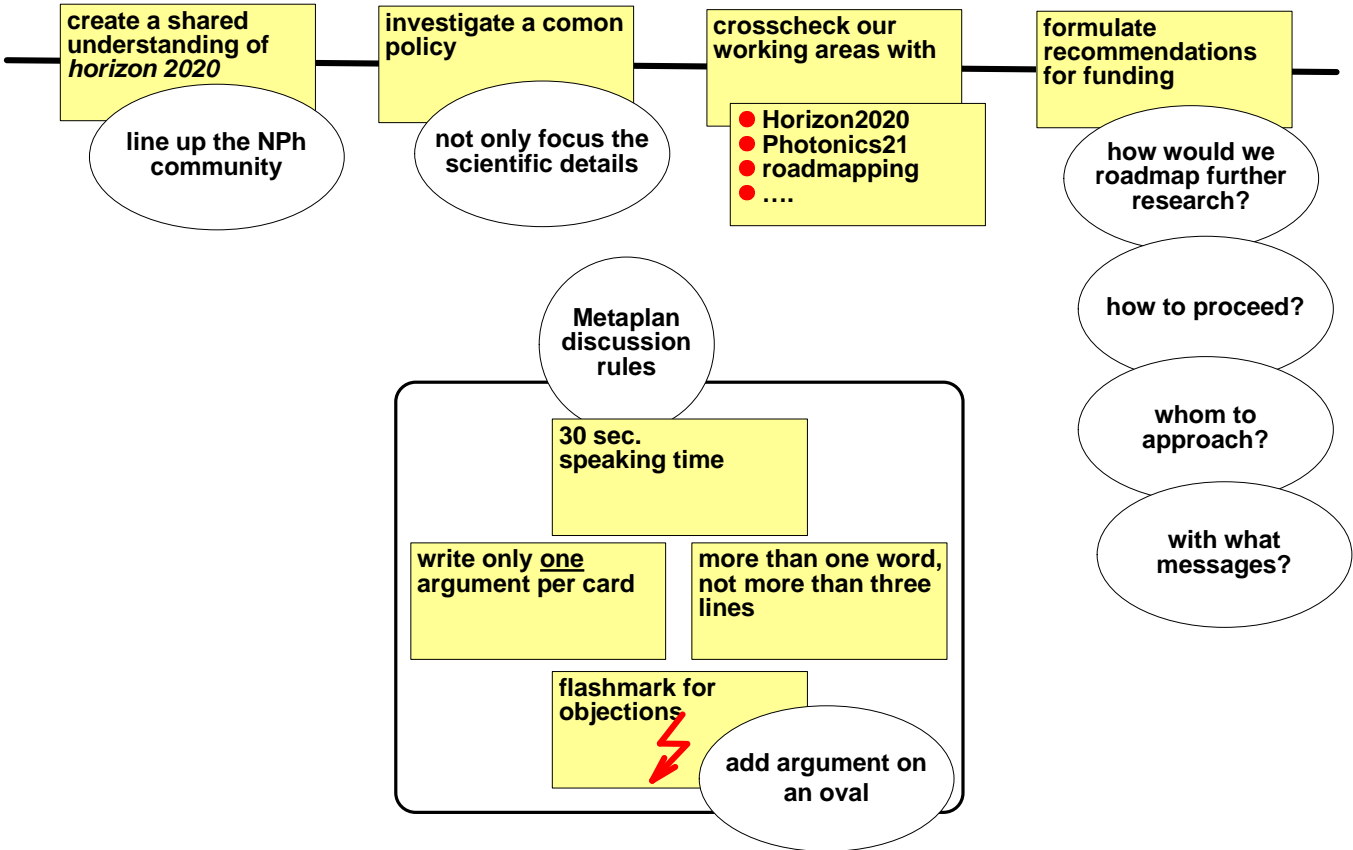


# Nanophotonics Foresight Workshop

London  
10./11.07  
2012

aims of this workshop



**we have exactly the european funding  
policy that we deserve!**

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**what makes it difficult for the  
european Nanophotonics Community  
to speak with one voice?**

# cornerstones of the new european funding programme

**HORIZON 2020**

new features

it brings together all  
european research  
and innovation  
funding

it strives for integra-  
tion of research and  
innovation by fun-  
ding from idea to  
market

it has an inclusive  
approach to new  
participants

it has a simplified  
programme  
architecture , rules,  
access

it gives more  
support of activities  
close to the market

new entrants,  
promising  
scientists, ...

reducing the  
time to grant to  
100 days

„seamless  
support“

incl. proof of  
concept, piloting ,  
demonstration

participation of  
SMEs will be  
strengthened

it puts a strong  
focus on creating  
business  
opportunities

what cornerstone will bring the  
greatest challenges for us?

and why?

**HORIZON 2020 focuses on three key priorities**

**excellent science**

**fund collaborative research**

**provide training and career development**

**ensure world-class research infrastructure**

**industrial leadership**

**build leadership in enabling and industrial technologies**

**ICT, nanotechnologies, advanced materials, ...**

**facilitate access to risk finance**

**support innovation in SMEs**

**societal challenges**

**health, demographic change and wellbeing**

**food security, sustainable agriculture, maritime research**

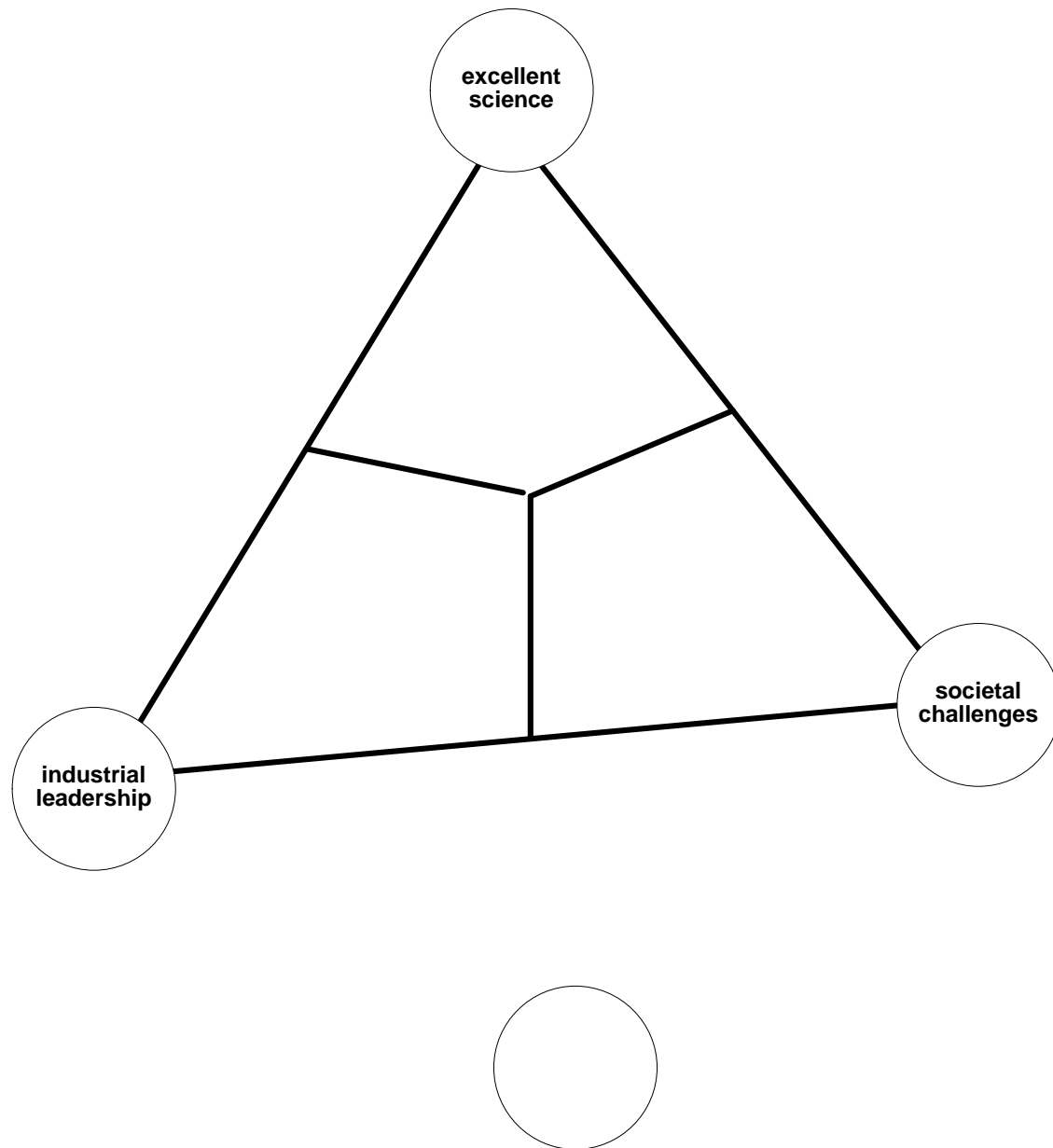
**secure, clean, efficient energy**

**smart, green and integrated transport**

**climate action, resource efficiency and raw materials**

**inclusive, innovative and secure societies**

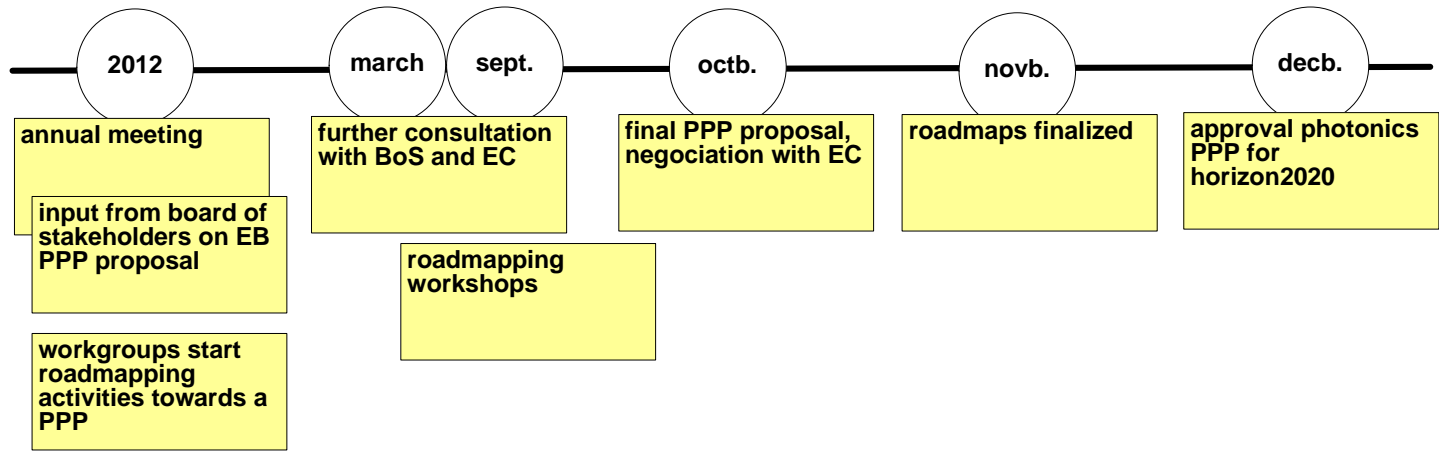
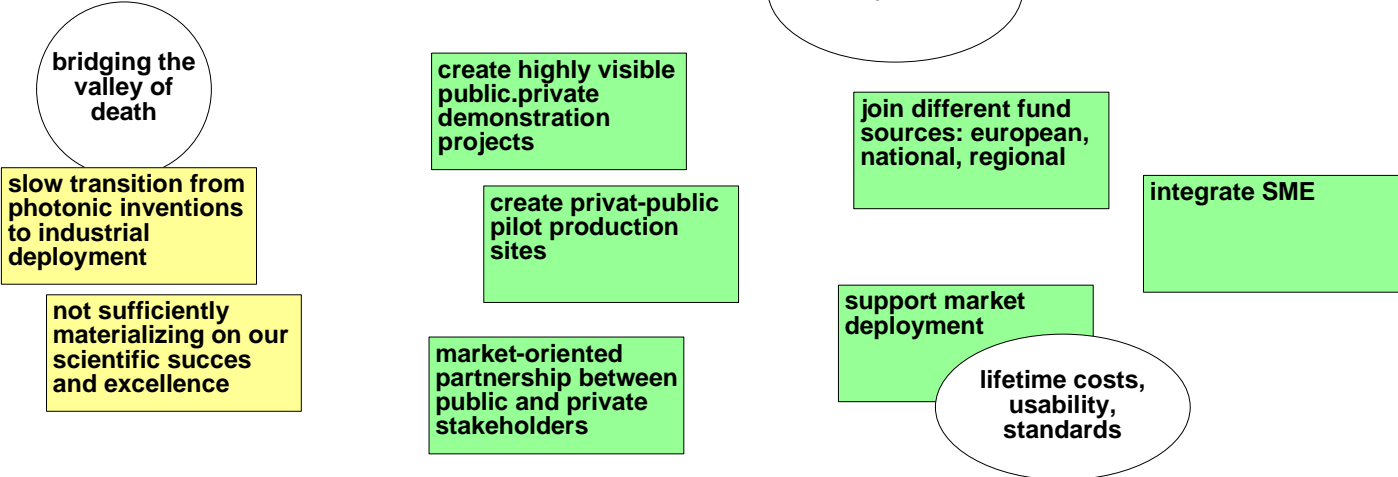
**with what priorities should it be easy to catch up with?**



**Photonics21 has been playing and is playing an active role**

**Photonics21 – Our Vision ...  
measures to make it happen**

may 2011



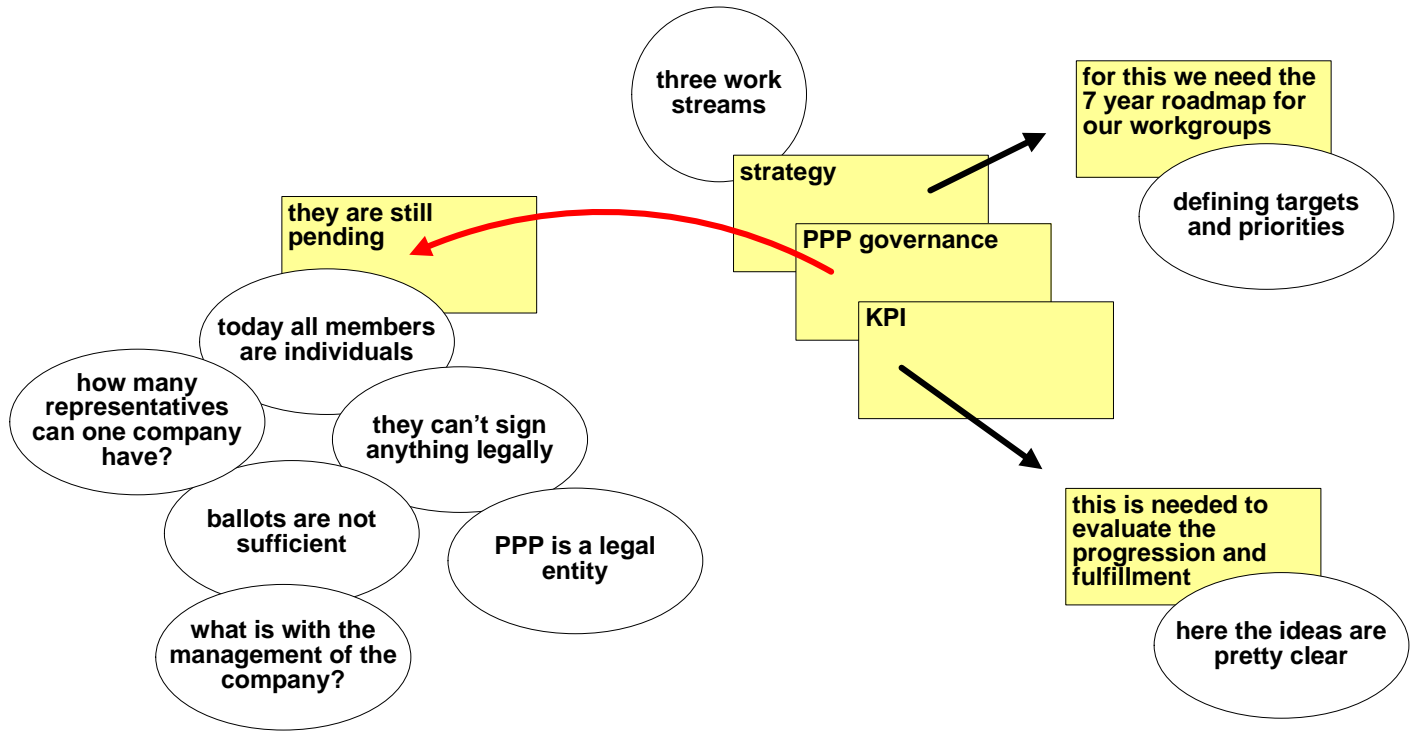
**PPP is considered as a major element of Horizon2020**

private sector partners, union and other partners commit jointly

to support the development and implementation of a research and innovation programme or activities

a longterm committment

**Photonics21 has committed to build up such a PPP**

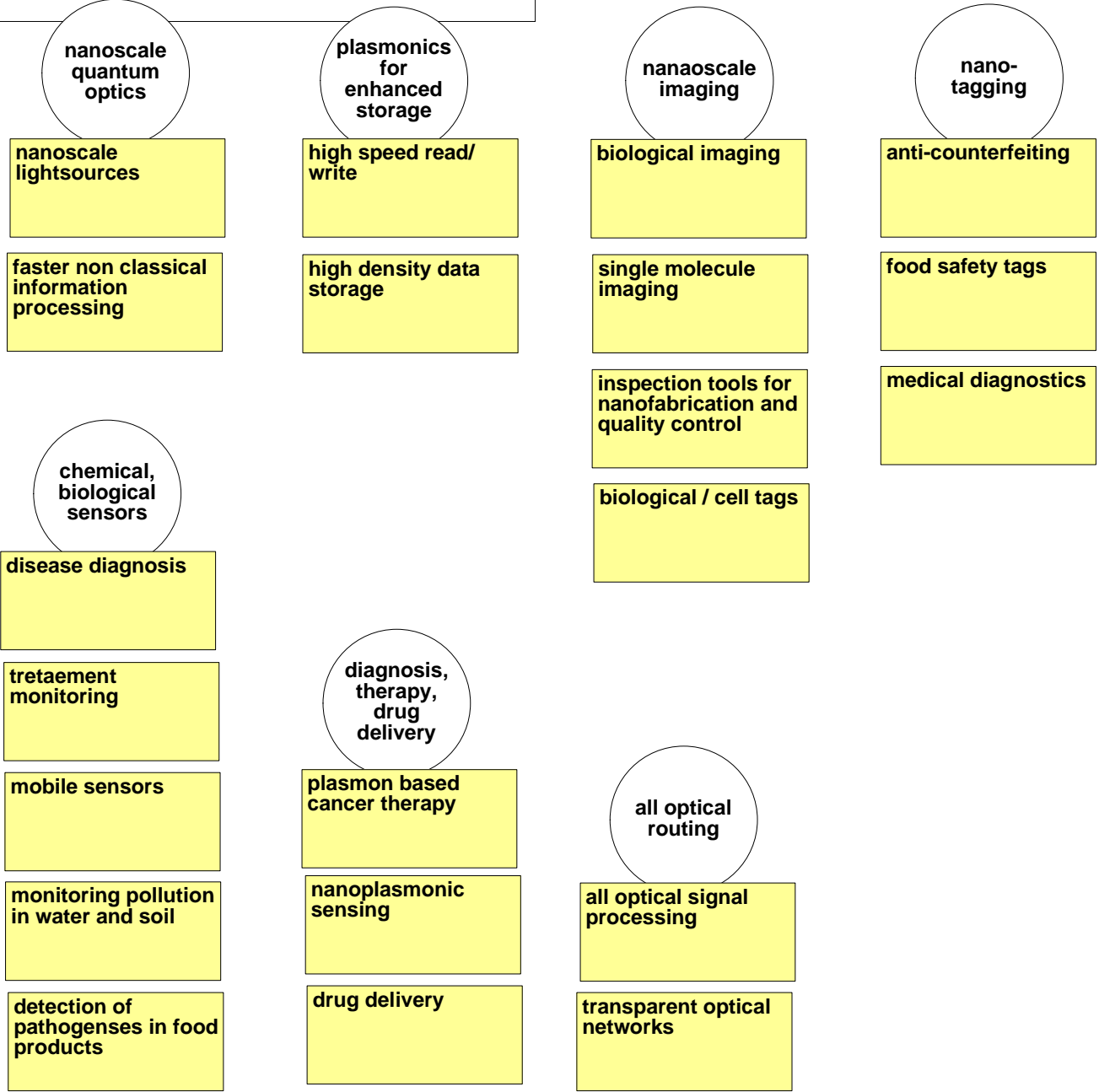


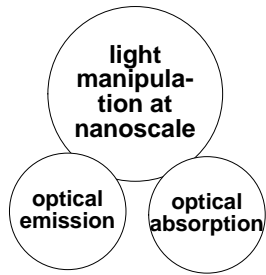


**what is our position with respect to these activities?**

**and what should we therefore do concretely?**

# Nanophotonics Foresight Report 2011 working areas and applications



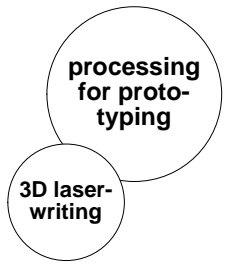


**light generation**

**light harvesting**

**high efficiency and high colour purity phosphors**

**polarised colour converters for LED TVs and backlighting**



**low cost rapid 2D and 3D prototyping**

**novel components for future all-optical Tb/sec networks**

**novel sensors**

**all optical quantum devices for secure quantum communication**



**direct patterning of passive photonic components**

**micro cavities**

**band edge lasers**

**waveguides**

**memories**

**optofluidic and lab on a chip devices**

**organic and inorganic solar cells**

**OLEDs and OFETs**



**heterogenous integration**

**opto-biotechnology**

**environmental sensors**

**medical sensors**

**artificial nanoscale materials**

**bio circuits**

**artificial tissue and organs**

**light harvesting**

materials with optical properties

meta-materials waveplates

compact waveplates for low cost circular dichroism studies in IR fingerprint regime

infrared absorber applications

detectors

bio-chemical sensing

nonreflective coatingd

nonl. & switchable meta-materials

optical switching

data processing

frequency conversion

optical filters

hyperspectral imaging in surveillance and remote sensing

Graphene Photonics

solar cells

LEDs

touchscreens

photodetectors

ultrafast lasers

what fields are ideally best fitted to respond to the new funding policy?

**how could exemplary activities in this area look like?**

**research  
field /  
application**

**why is this  
attractive for  
investments  
/ comercial  
activities?**

**what do we  
want to  
achieve?**

**why is this  
important?**

**what  
could be a  
demon-  
strator?**

**who should  
participate,  
and why?**

**what is  
needed to  
spread  
innovation?**

**what further  
funding  
could be  
mobilized?**

**what are  
cross-  
cutting KET  
issues?**

**how could an exemplary roadmapping  
in this area look like?**

now

2014/15

2016/17

2018/19

2020

**who from the working group could  
produce a first draft?**

to feed into the  
roadmaps of the  
Photonics21?

who can bring this  
forward in the WGs?

the Nanophotonics  
Ambassador