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# Financial tools to develop geothermal in Poland

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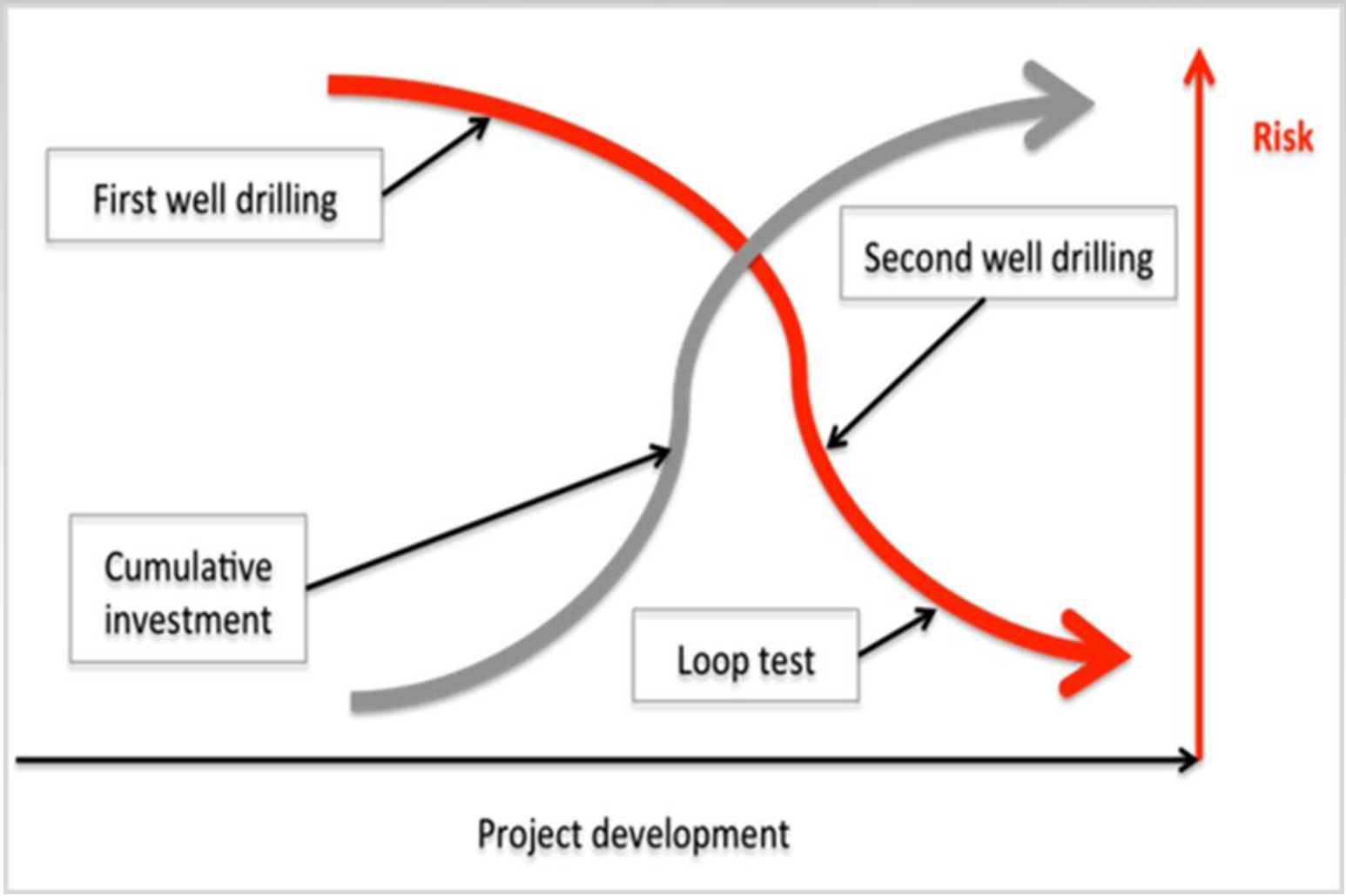
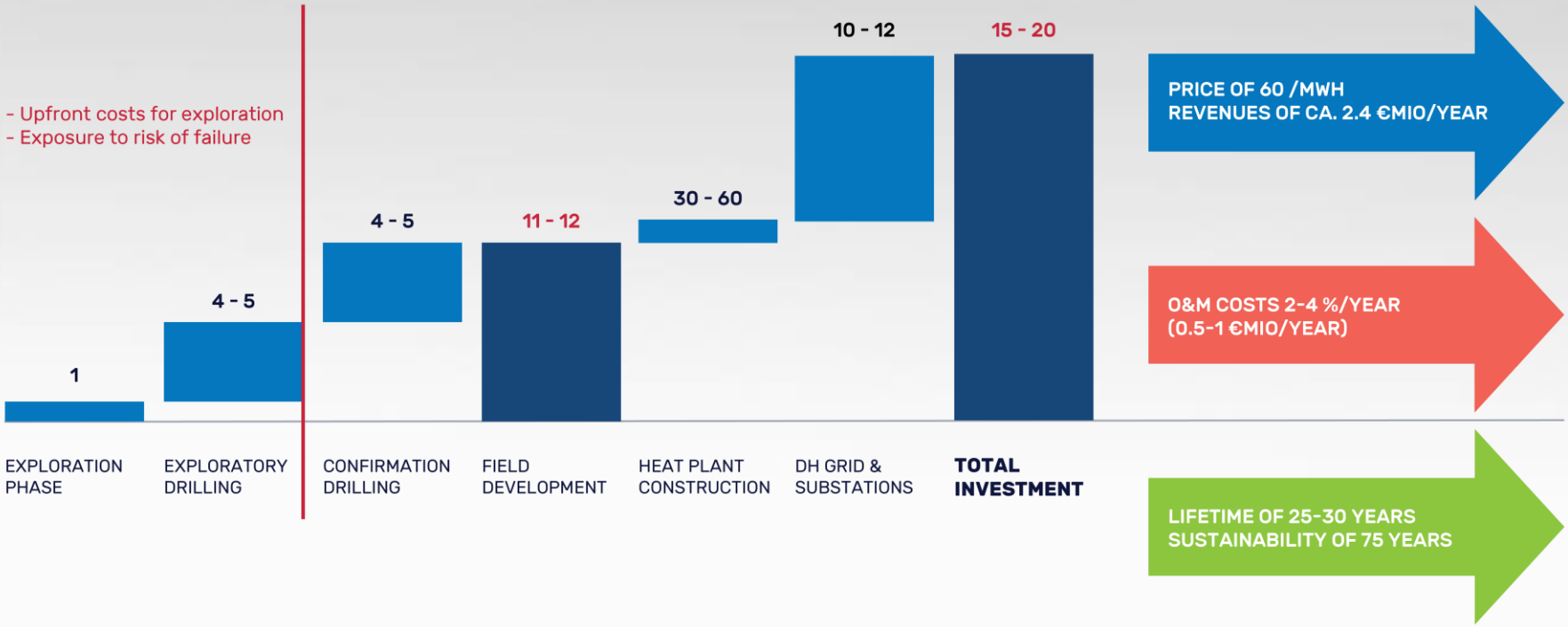
# Investment risk: a key challenge



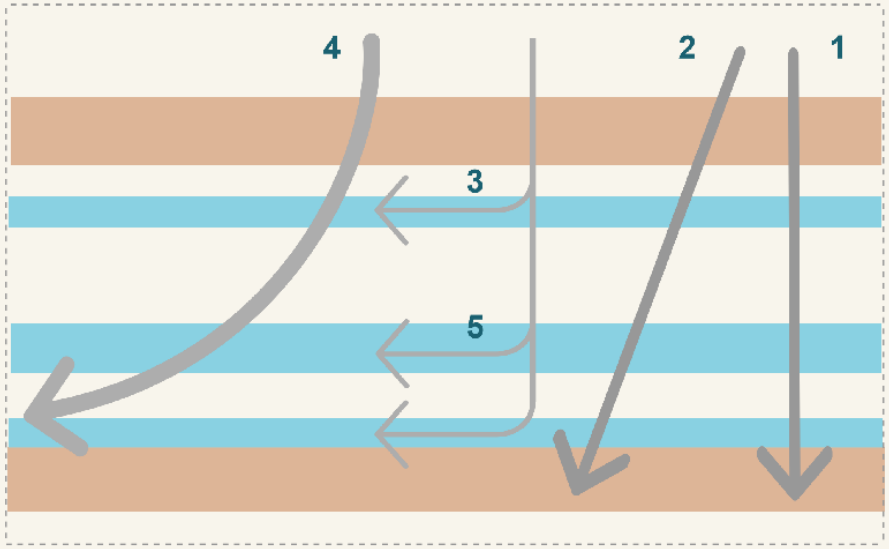
# Example: € million, based on a 10 MWth geothermal DH systems, doublet

Example: € million, based on a 10 MWth geothermal DH (doublet) systems, producing 40 000 MWh/year (Investment cost = 3.2 €mio/kwh)



# Case of drilling costs

## INNOVATIVE WELL DESIGNS
## CANDIDATE WELL TRAJECTORIES




1 Vertical well

2 Deviated well (30-35')

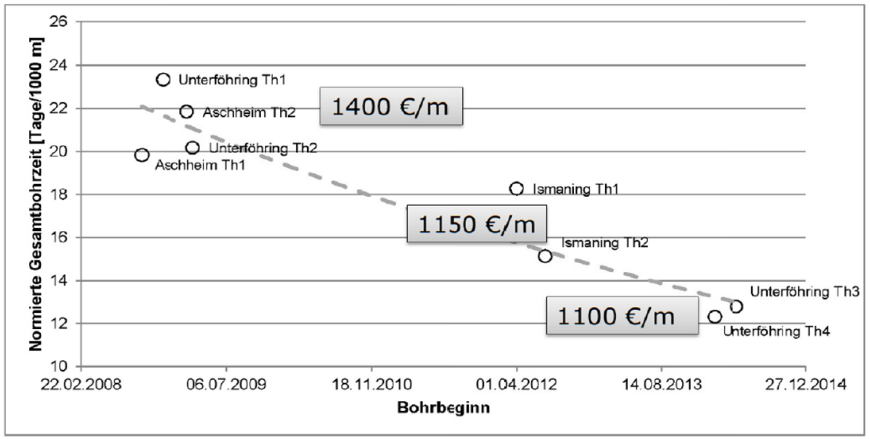
3 Horizontal drain intersecting one layer

4 Subhorizontal well (80-85') intersecting all the producing layers

5 Multilateral well, horizontal drains, intersecting all the producing layers

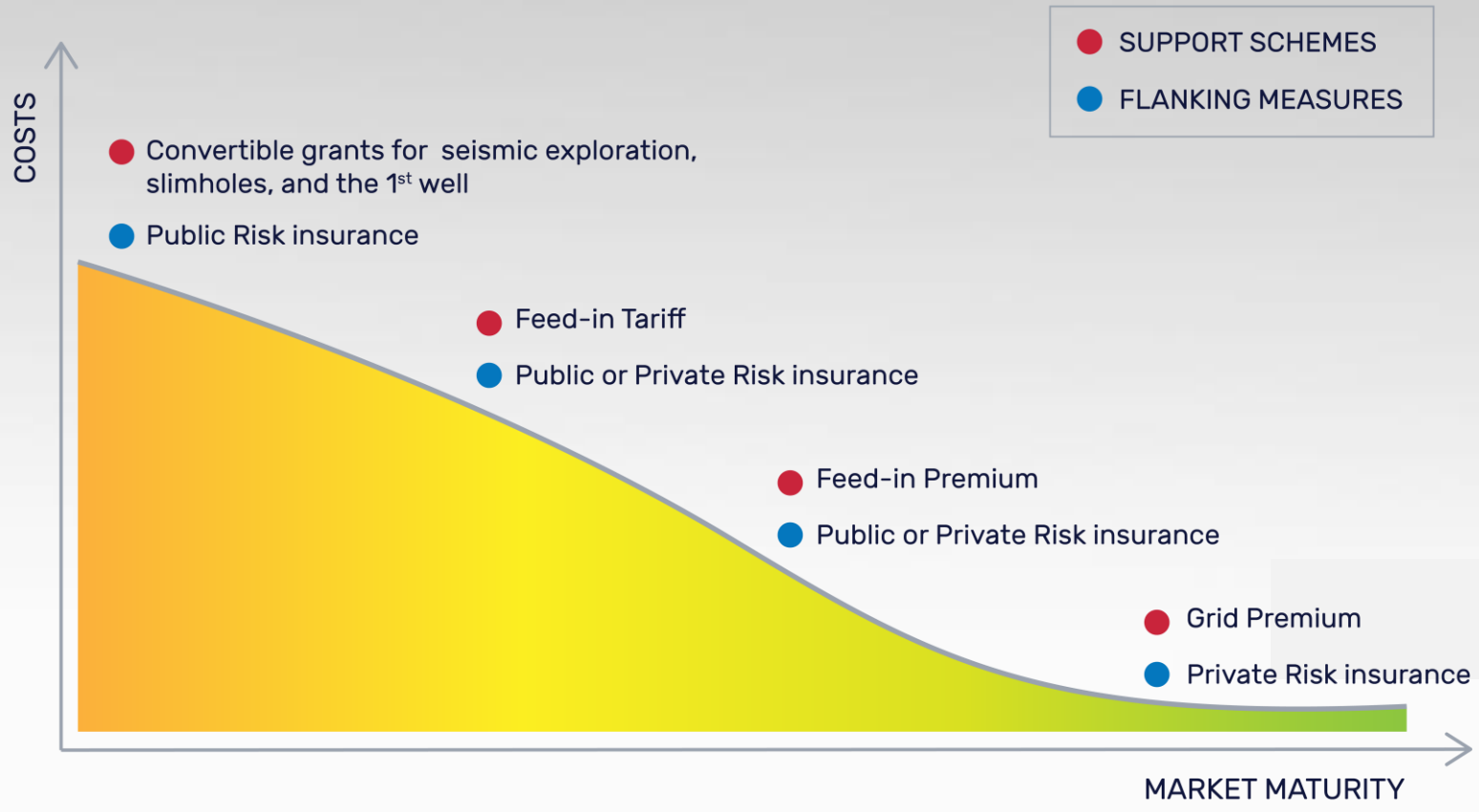
## Project Expansion Unterföhring

### Lessons learnt

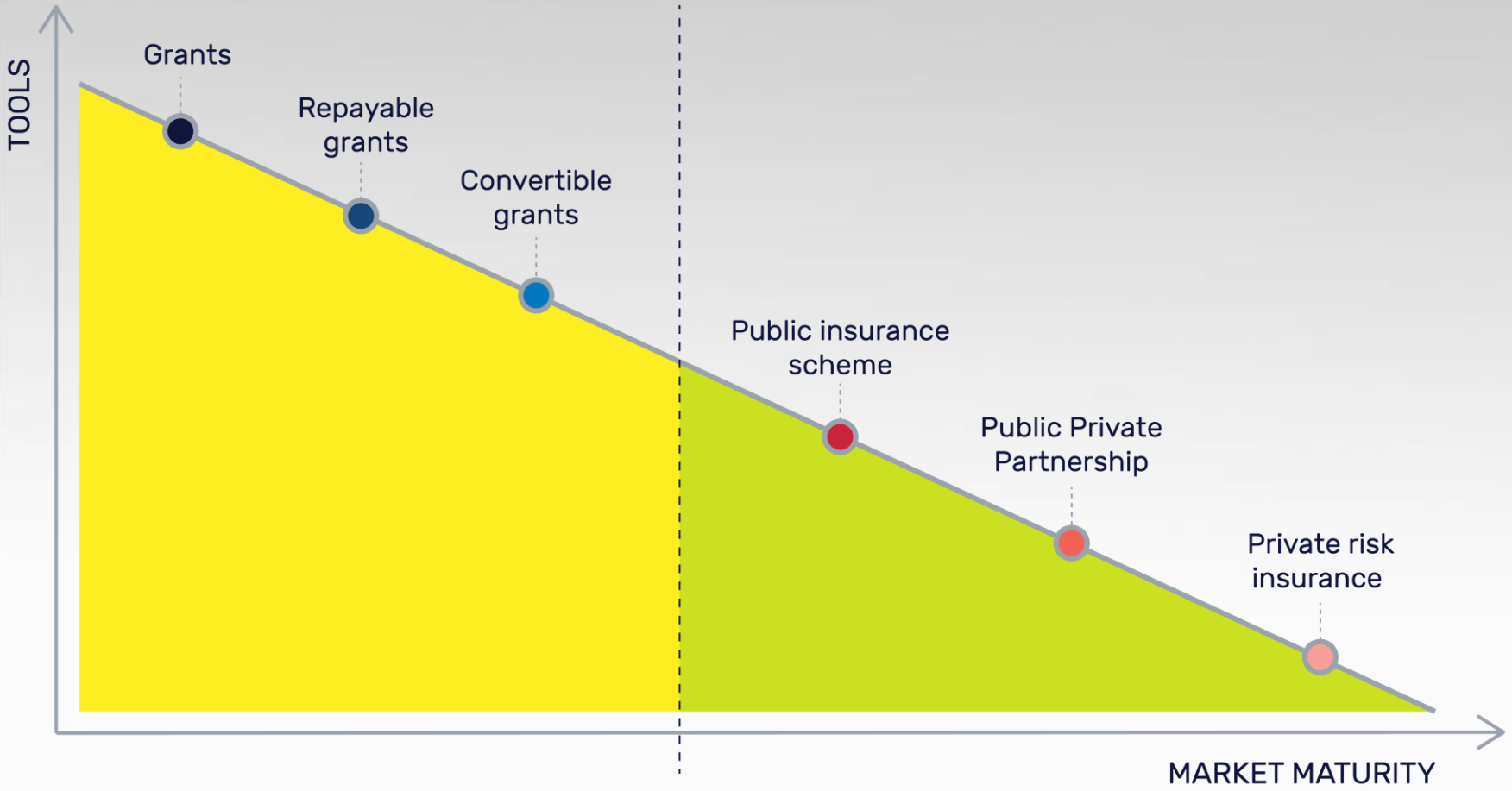



*Weitere Info in:* • *BBR: Sonderheft Geothermie 2015*

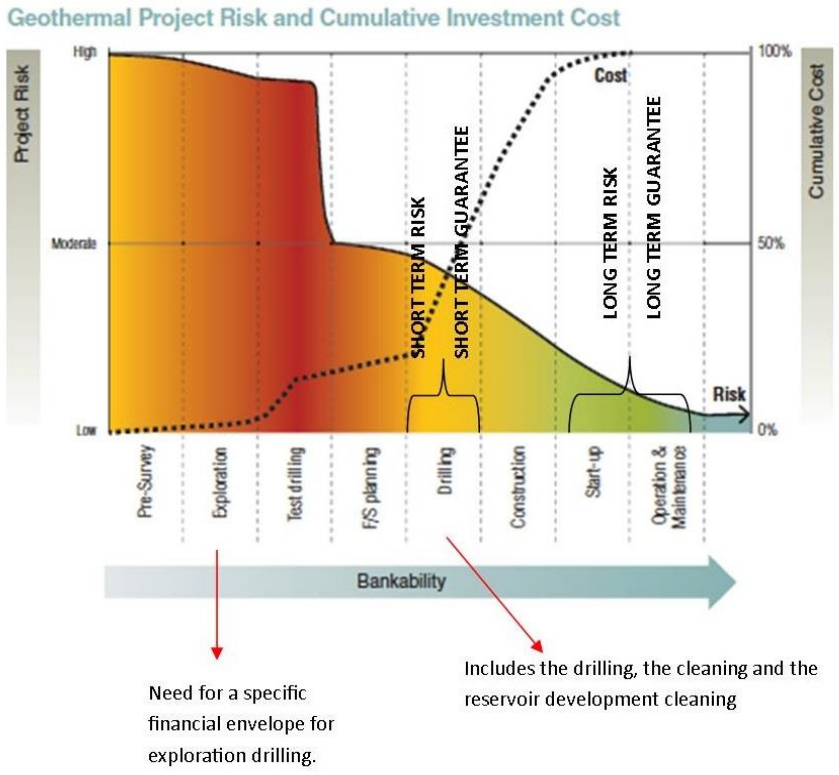
# Support schemes for Geothermal adapted to technology maturity

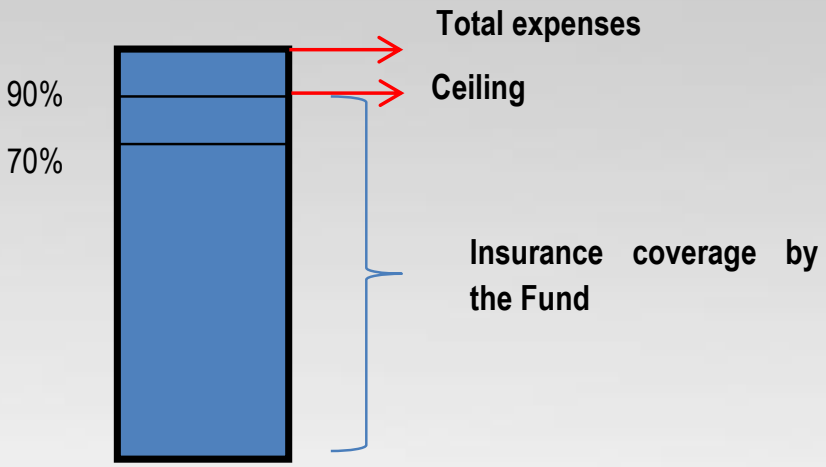


# Financial tools to mitigate the Risk



# Case of Risk Insurance Scheme




1) **The short term risk: a post-damage guarantee**
To cover a significant amount of projects
Fee depending on the estimated risk

2) **The long term risk: a post-damage guarantee**
Be cautious to prevent unsustainable reservoir management
Annual fee

# Thank you for your attention!

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