LT-INNOVATE.EU

REVELATION

Brussels, June 26, 2013

Since humanity exists,
we wonder about
how COOPERATION
really works

The recent developments tell us…

OUR NATURE + OUR SITUATION + OUR THINKING = OUR BEHAVIOR

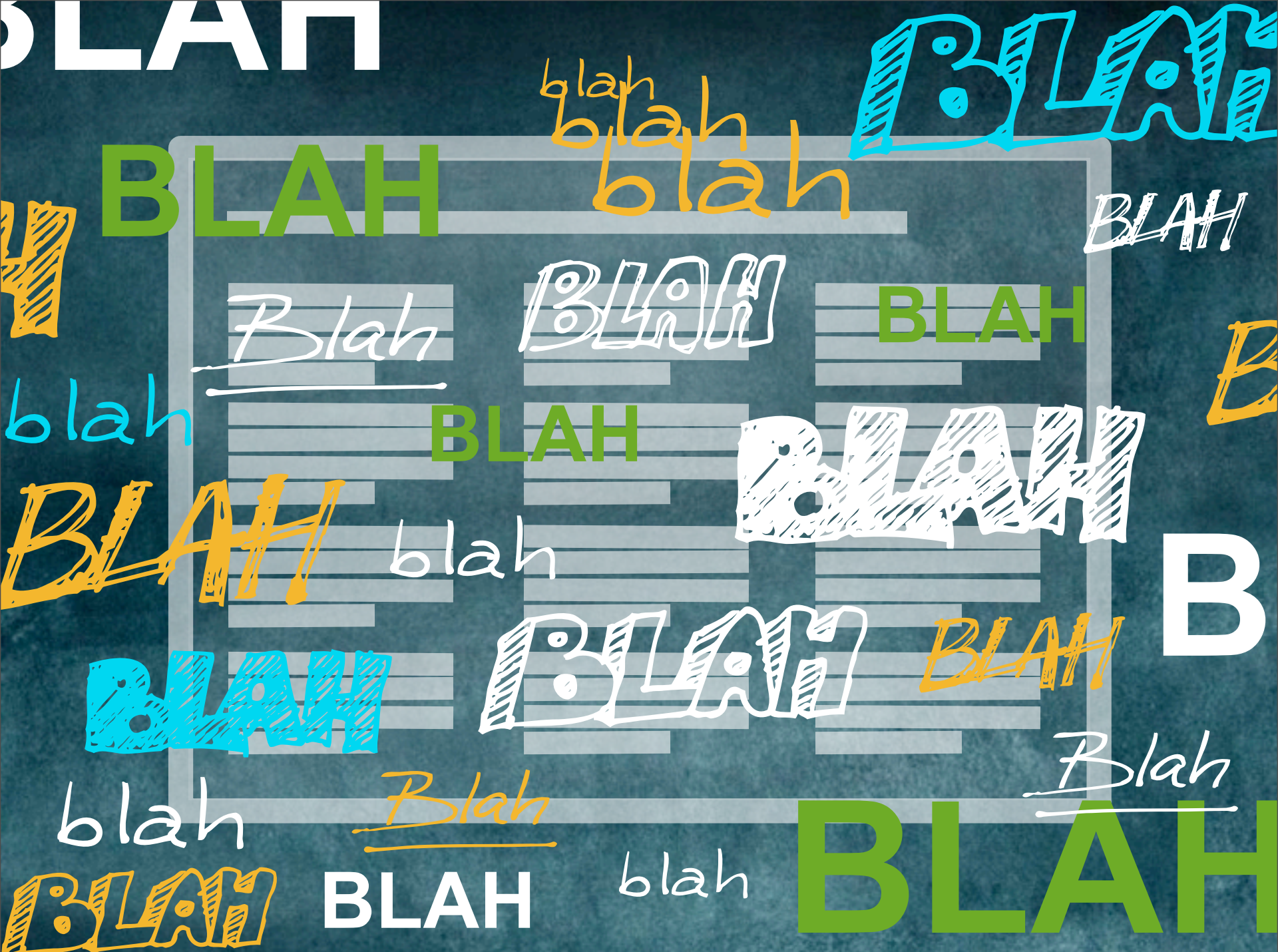
Thinking alone prevents us from cooperation

Let's think together how to cooperate.

CASES OF COOPERATION

- How should a group of farmers share the cost of a common irrigation or drainage system?
- How should the countries in the world share the cost of reducing global warming?
- How should grown-up siblings share the burden of caring for their elderly parents?
- How do the language technology providers cooperate to build the future European Language cloud?

prioritize | organize | mobilize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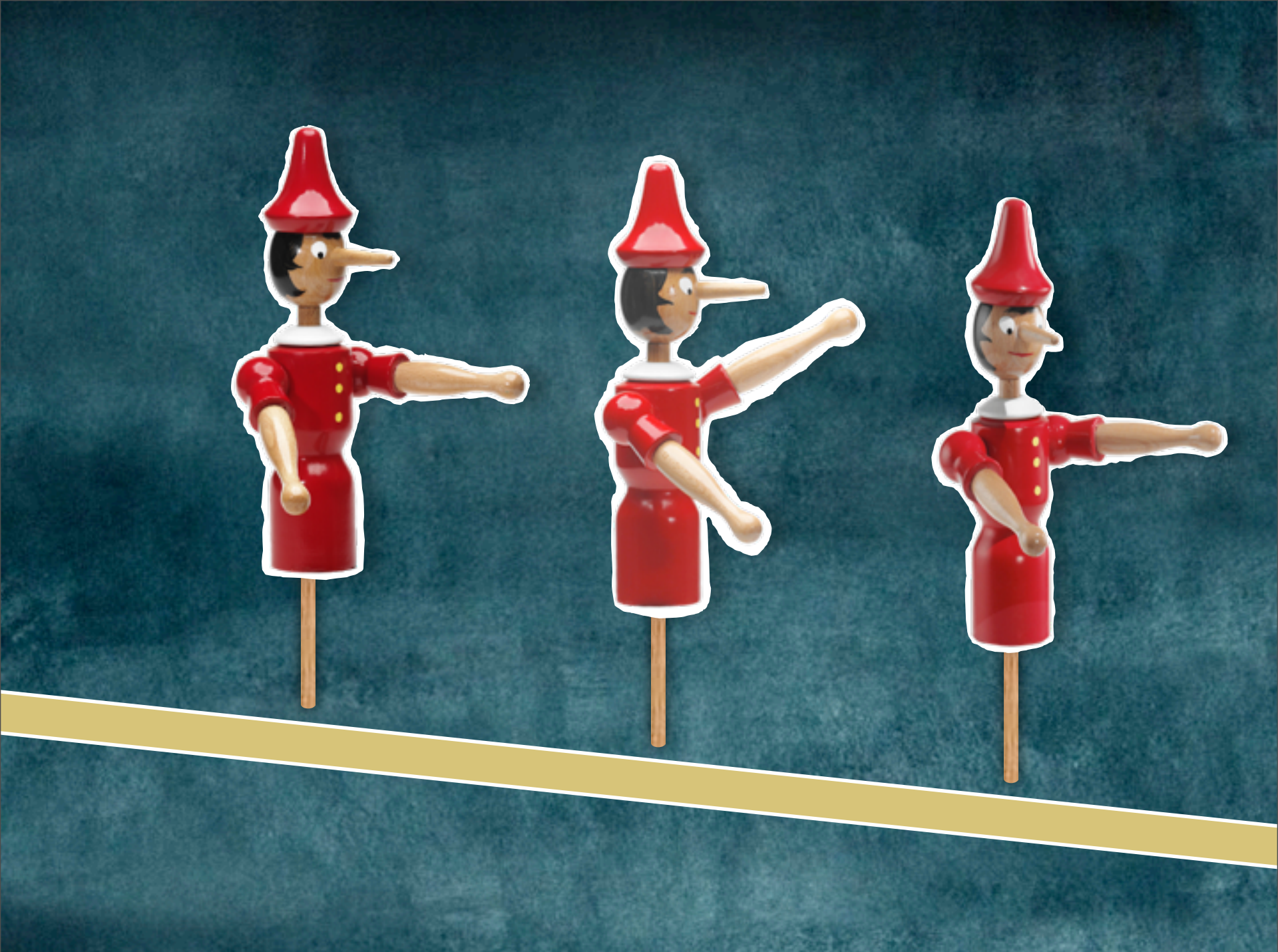
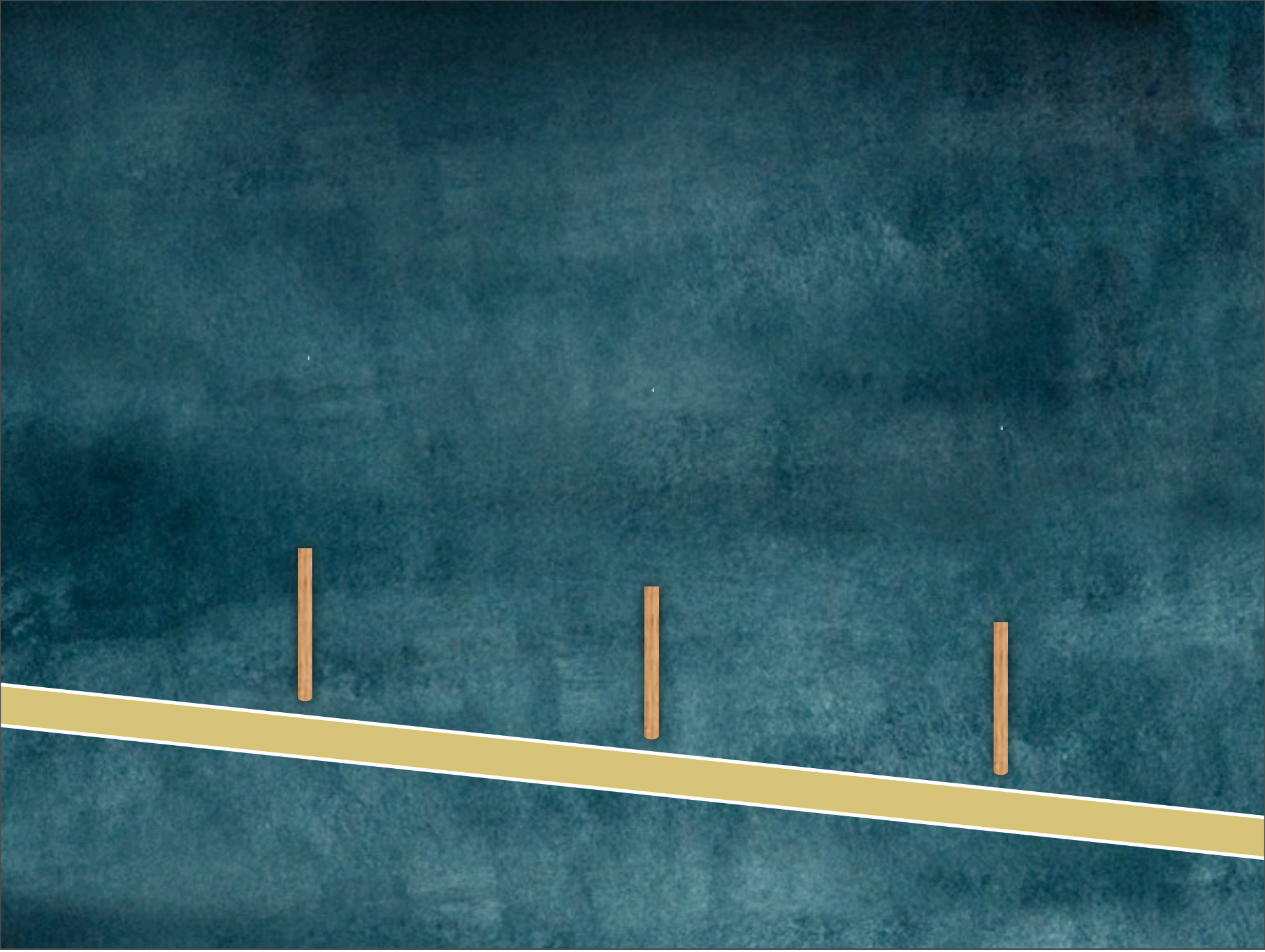
Cooperation Drivers

- FEAR
- REWARD
- GOODWILL

USE ALL OF THEM

STOP
THIS WAY





GLOBAL
CAUSES

THE GOOD, THE WORLD

THE GOOD, THE WORLD?

THE GOOD, THE WORLD?

But there is one QUESTION.

IF cooperation is
S.GOOD,

WHY is it so
F.DIFFICULT?

IF cooperation is S.GOOD,

WHY is it so F.DIFFICULT?

SHOWSTOPPER

Working together means sharing your Private Information (PI)

When individuals have private information about their own willingness to pay for the public good, they may be tempted to pretend to be relatively uninterested, so as to reduce their own share of the provision cost.

MECHANISM DESIGN: Non-Cooperative Games Theory

- Mechanism Design theory is a breakthrough on the level of Einstein and Adam Smith.
- Social problems are non-cooperative games
- Institution is a communication system
- Pareto efficiency: No one can be made better off without making someone else worse off.

MAJOR TAKEAWAYS

- When individuals have Private Information about their own willingness to pay for the public good, they are tempted to pretend to be relatively uninterested, so as to reduce their own share of the provision cost.
- Hurwitz, 1972, individualism works against public goods: people would not reveal their true willingness to pay. «No mechanism with Pareto-optimal outcome exist In in an exchange economy with dominant strategy for agents is to report PI truthfully»
- Private Information Precludes Full Efficiency
- If participation is voluntary and decisions to start the project must be taken unanimously, free-riding destroys the project. **Probability of funding the public project is zero despite everyone knowing that they can be jointly better off if the project is funded.**

THE CLARKE-GROOVES MECHANISM

- IF there are no income effects on the demand for public goods (utility functions are linear = the value of public good is equal to all participants),
- THEN there exists an incentive-compatible class of mechanisms in which (a) truthful revelation of one's willingness to pay is a dominant strategy, and (b) the equilibrium level of the public good maximizes the social surplus (mechanism is incentive efficient).

THE CLARKE-GROOVES PROCESS

- Each agent is asked to report willingness to pay for the project.
- The project is undertaken if and only if the cost of the project is lower than total willingness to pay.
- If the project is undertaken, each agent pays the balance between the cost of the project and everyone else's reported total willingness to pay.
- With such "non-participation tax" each agent "internalizes" the total social surplus, and truth-telling is a dominant strategy.
- The mechanism exists to launch projects!

CONCLUSION

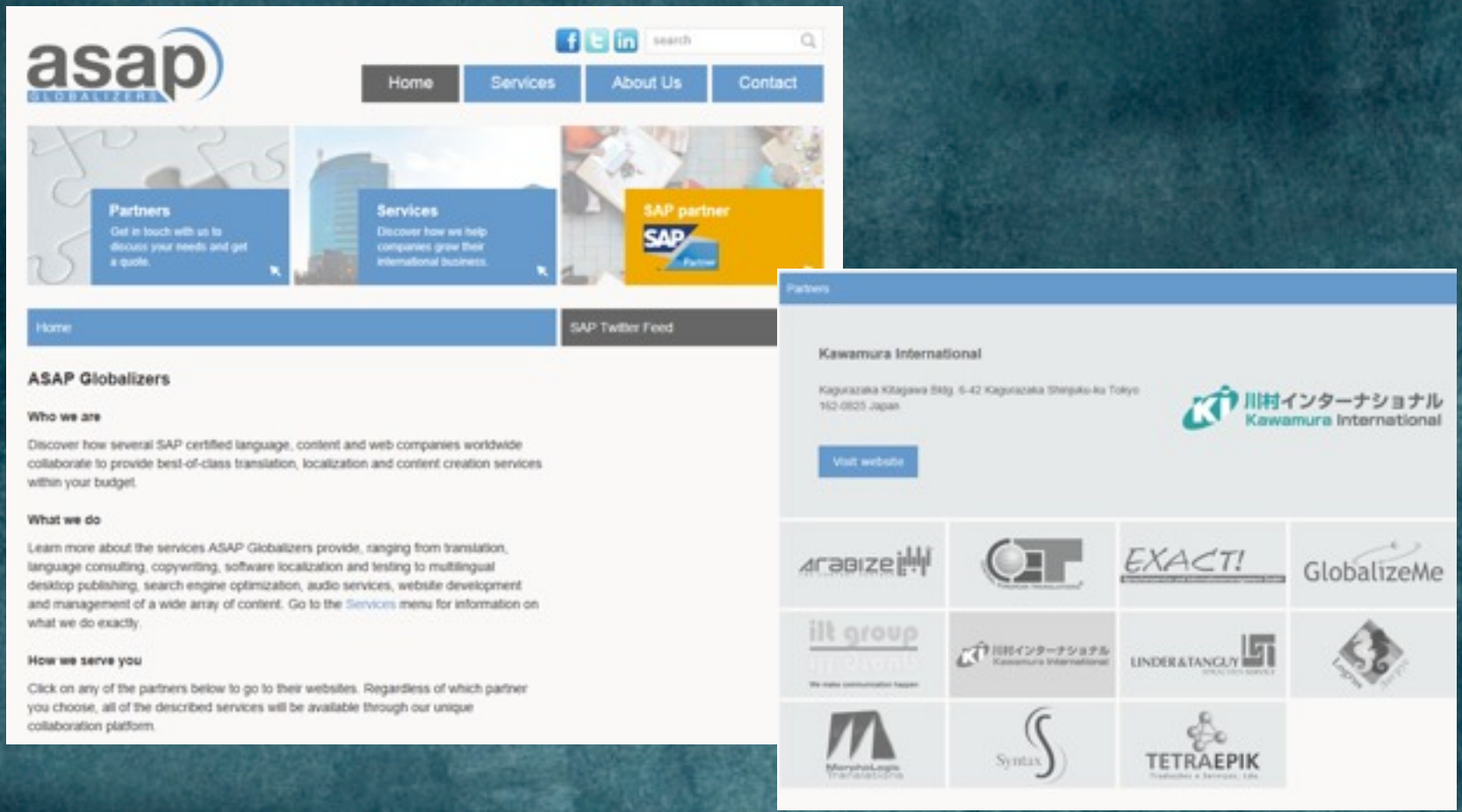
- Public good development effort can be started with Clarke-Groves mechanism ("non-participation tax") IF:
  - budgeting is efficient, (all collected money are spent efficiently, no private gain is suspected), OR
  - value of result is the same to all agents (no clear difference in value must be perceived or expected), OR
  - perceived value of shared Private Information is Zero
- otherwise:
  - No unanimous decision of association members must be required to launch effort (there must be decisive Committee), or
  - Participation must be mandatory for all members

INDIVIDUAL ENTITIES ACTING TOGETHER

- **Setup:** Industry gathering of businesses.
- **Incentive:** Outside entities, changes of the landscape pose more threat to members individually than to each other as competitors. Members can greatly benefit from cooperation by obtaining competitive advantages and creating public good in sharing business information and cooperating.
- Mechanism? We can either make all members to participate, or convince them all to achieve consensus, or carry out less than global initiative with motivated core nucleus of participants.

COOPERATION EXAMPLES

www.asapglobalizers.com



COOPERATION EXAMPLES

www.alcus.org

http://www.elia-association.org/

www.gala-global.org

www.oasis-open.org

www.w3c.org

GALA CRISP
(Collaborative Research, Innovation and Standards Program)

www.lt-innovate.eu ??????????????????????

LT-Innovate OSCAR project ?

DISCUSSION

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