



Plan for Public EU PV Buyers

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BACKGROUND

1. Low cost, mainstream Solar PV modules (c-Si from China)

Not so durable

- High Carbon footprint
- Toxic materials - PFAS, Lead, Antimony
- Short Lifespan - shorter than many people think)
- Forced labour - e.g., Xinjiang

2. More sustainable PV modules are available **NOW**

- 3-4 x lower Carbon footprint
- No toxic materials
- Long Lifespan (>30 years)
- OK labour conditions

However, PV project costs
5-15% higher

3. Big information gap

- Very little awareness amongst buyers
- Intransparent industry, scarce facts on these topics and price differences

4. High urgency

- EU is flooded w Solar modules (*each year*: 30-40 GW = 200 km² = 100 Million modules)

5. Public Buyers have major role

- Public Buyers have 20-30% marketshare and broader interests than lowest purchase price

MAJOR OPPORTUNITY

TO AVOID CARBON EMISSIONS & TOXIC MATERIALS

	Unit	1 kWp (2-3 PV modules)			European Union	
		Mainstream PV modules ¹	Top 3 Average	Delta	All public buyers ² (~10 GWp/yr)	All PV installations (~50 GWp/yr)
Carbon footprint	ton CO ₂ -equiv.	1	0,3	-0,7	7 Mton	35 Mton
Toxic materials						
PFAS	m ²	5	0	-5	50 Mln m ²	250 Mln m ²
	gram	75	0	-75	750.000 kg	3.750.000 kg
Lead	gram	10	0	-10	100.000 kg	500.000 kg
Antimony	gram	60	0	-60	600.000 kg	3.000 ton kg
Technical lifetime	years	15	30	15		
<i>Annual benefits in 2035+:</i>						
Avoided material use					600 kton	3 Mton
Avoided carbon emissions					10 Mton	50 Mton
Avoided replacement costs					€ 3-4 Bln	€ 15-20 Bln

GETTING PUBLIC BUYERS TO ACT

~1 Mln public organisations
in EU

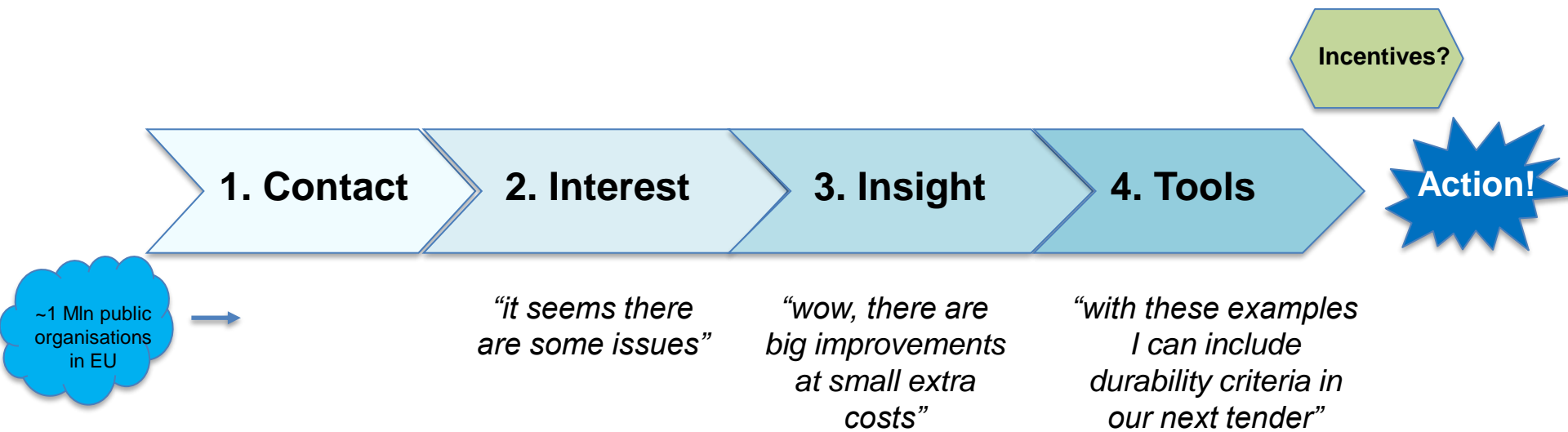
- Used to buying the lowest price
- More durable PV is more expensive (5-15% project cost increase)
- Little awareness with PV's durability issues
- In the absence of a GPP requirement, buying more durable PV is purely **voluntary**



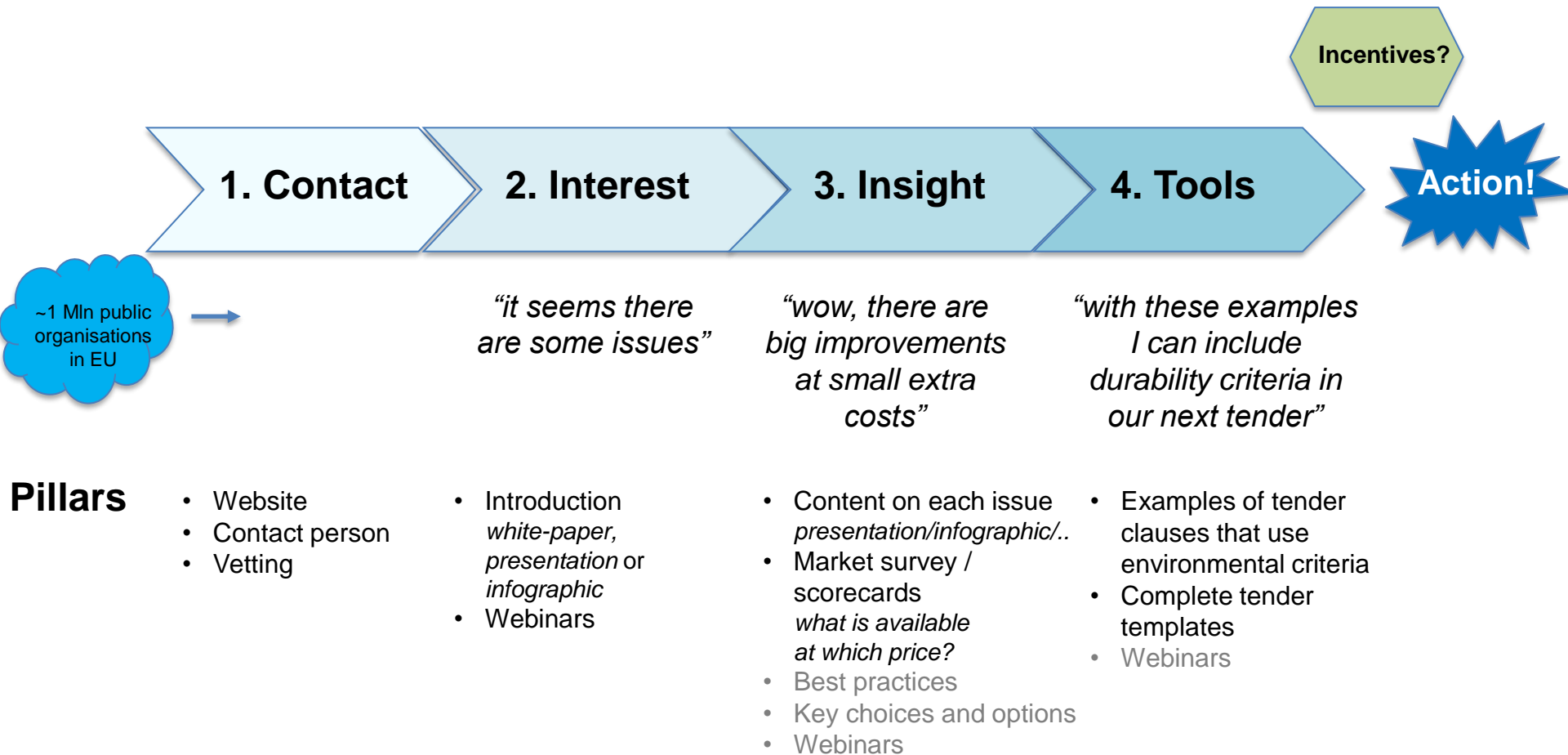
We need to win their *hearts & minds*
+ provide examples/templates

Possibly, provide **incentives**;
e.g., low interest loans from EIB

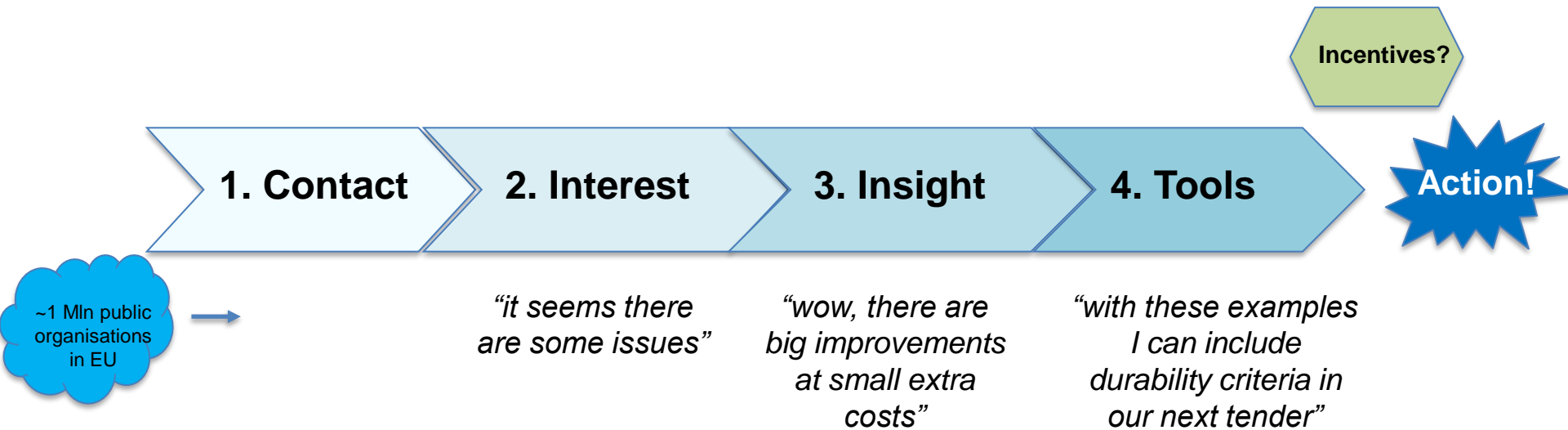
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Pillars

- Website
- Contact person
- Vetting

- Introduction *white-paper, presentation or infographic*
- Webinars

- Content on each issue *presentation/infographic/..*
- Market survey / scorecards *what is available at which price?*
- Best practices
- Key choices and options
- Webinars

- Examples of tender clauses that use environmental criteria
- Complete tender templates
- Webinars



TASKS / RESOURCES /FUNDING FOR CONTENT

Content examples

as presentation/text/infographic

Interest

- Introduction

Insights

- Labour conditions
- Carbon footprint
- Toxic materials
- Module lifetime
- Rare materials
- Recycling, Reuse
- Ecodesign (layout)
- Insurance
- ..
- Market survey
- Scorecards

Example clauses for tenders

- criteria for durability
- other aspects

Task	Effort / €€	In-kind/ paid by ..	Status
1. Create draft (Dutch)	3-8 man-weeks per document	in kind Dutch gov't	Done
2. Translate to English (+ adapt to EU context)	..		-
3. Review by experts	..		-
4. Review by CoP committee	..		-
5. Uniform style / layout	..		-
6. Publish	..		-

Note: often, annual updates required