



Citizen- centered approach to data:
how do we make services that are
accepted and privacy-proof?

Antonio Kung





Antonio Kung

- 30-year experience ICT
- Coordinator PRIPARE
 - Support action Privacy-by-design
 - Commitment 7001
- Active in standardisation
 - Editor ISO 27550 Privacy engineering
 - Co-rapporteur ISO SC27/WG5 Privacy in smart cities
 - Co-rapporteur ISO SC27/WG5 Guidelines for privacy in the IoT
 - Participant ISO 20547 Big data reference architecture – Security and privacy fabric



Initiative

- Citizen Centric Approach to Data –Privacy-by-design
 - Snowden revelations
 - Something must be done to protect a citizen's right to privacy
- Initiative leaders
 - Antonio Kung (chair)
 - Chris Cooper (co-chair)

TRIALOG



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Characterizing Concerns for Privacy Management

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GDPR: General Data Protection Regulation

Published on May 4th 2016








Enter into force on May 24th 2016

Apply on May 25th 2018

- Privacy-by-design (PbD) and by-default
- Privacy Impact Assessment (PIA)
- Data Protection Officers
 - All public authorities and companies processing personal data on a large scale
- Sanctions for breaches
 - up to 20,000,000 EUR
 - up to 4% of the annual worldwide turnover



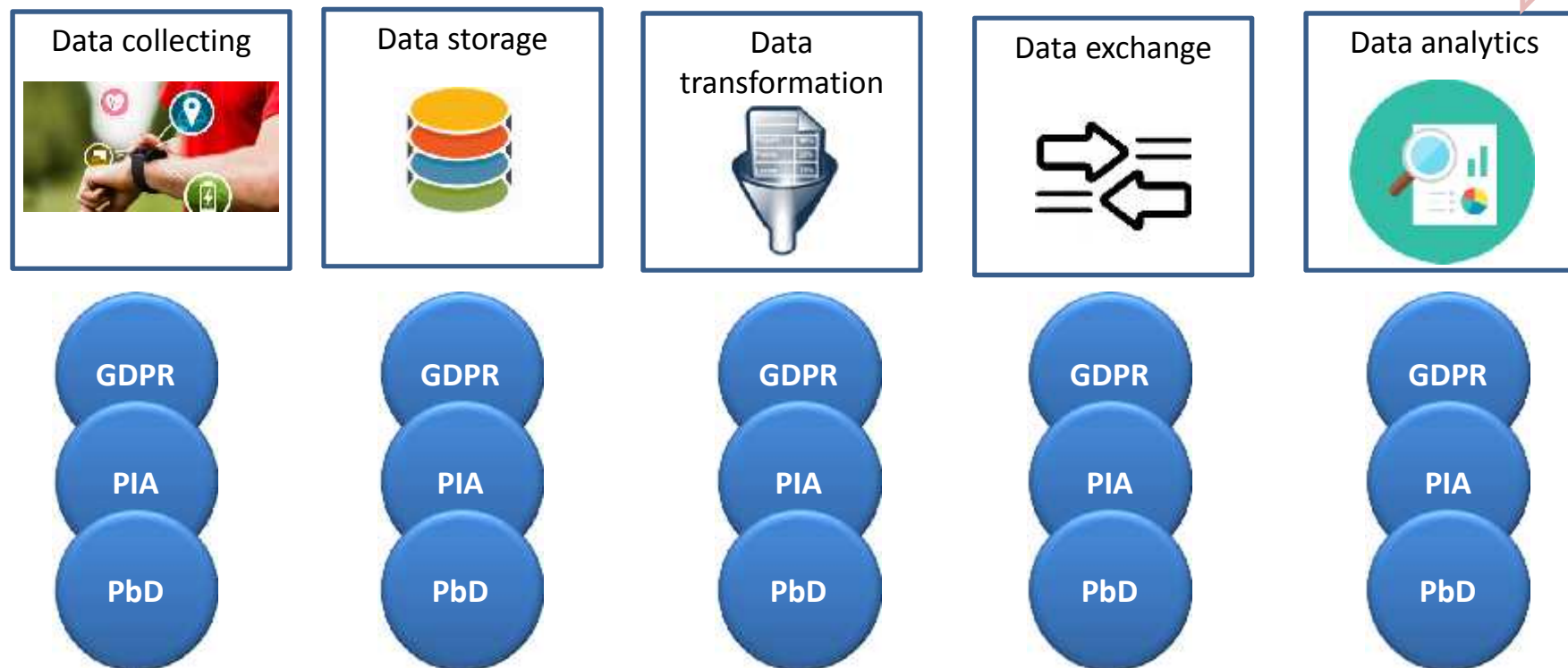
Stakeholder Concerns on Privacy

Stakeholder		Legal Compliance Level	Management Level	System Lifecycle Level
Demand side ↓ Supply side	Policy maker 	Compliance		
	Operator Data Controller 	Compliance requirements Regulation	Compliance Requirements Privacy Impact Assessment	Compliance requirements Privacy-by-Design
	Operator Data processor 			
	Supplier 	e.g. Operators Requirements		



Example Big Data: City Viewpoint

Chain of operators






Supply Side Concern



Smart City Application operator

GDPR PIA PbD

Sensor



Device



Smart device



Cloud solution



Purpose unknown
Small operator VS big operator

Electronics



Security module



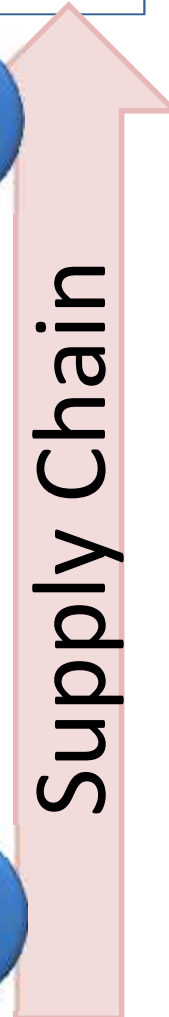
OS



Middleware



GDPR ? PIA ? PbD ?





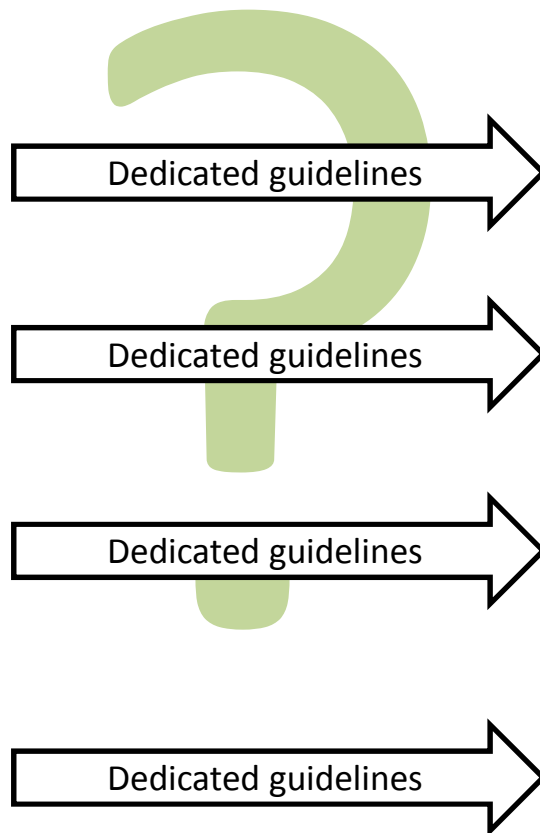
What we can discuss during the World Café (1)






PRIPARE
methodology


ISO 27550
Privacy engineering
guidelines

Global guidelines

Who are the stakeholders?
What are their specific roles?



Smart City Ecosystem	
Demand side	Policy maker 
	Operator Data Controller 
Supply side	Operator Data processor 
	Supplier 



What we can discuss during the World Café (2)

- Do you comply with privacy principles (e.g. ISO 29100)
 - Consent and choice
 - Purpose legitimacy and specification
 - Collection limitation
 - Data minimization
 - Use, retention and disclosure limitation
 - Accuracy and quality
 - Openness, transparency and notice
 - Individual participation and access
 - Accountability
 - Information security
 - Privacy compliance
- Do you deal with protection goals?
 - Confidentiality
 - Integrity
 - Availability
 - Unlinkability
 - Transparency
 - Intervenability
- What are your design strategies?
 - Minimize
 - Hide
 - Separate
 - Aggregate
 - Inform
 - Control
 - Enforce
 - Demonstrate



Thanks

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