

W3C TPAC breakout session

# Trusted Internet

Towards the realization of the secure use of  
information for people

14 Sep. 2022

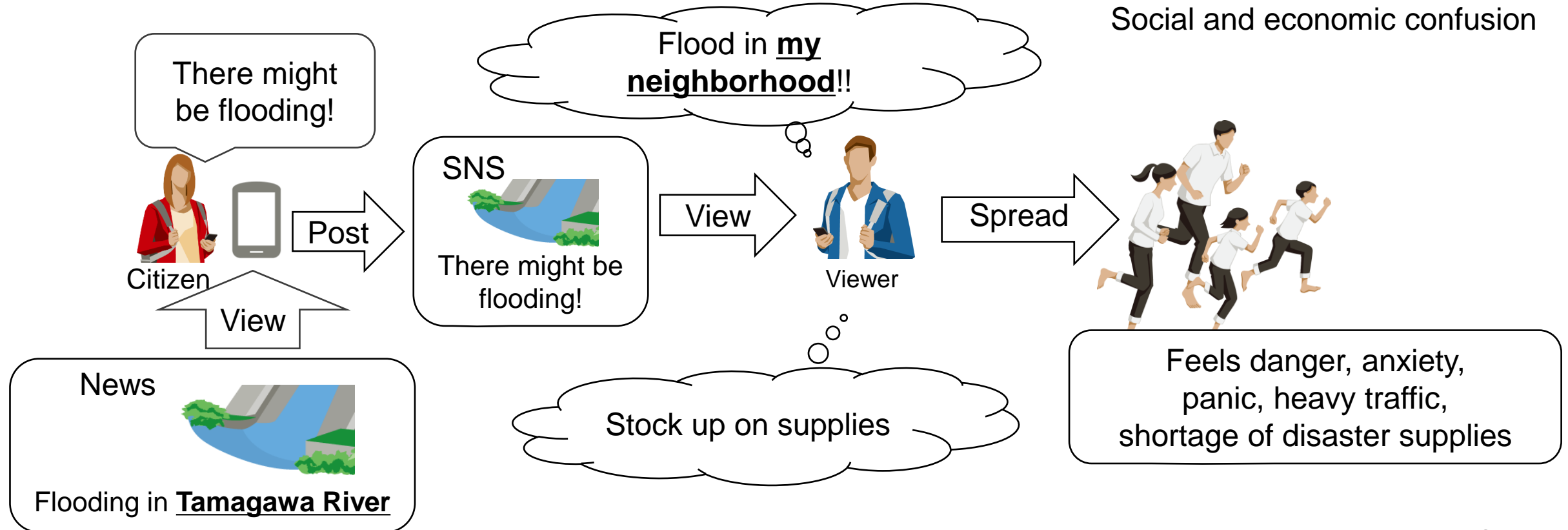
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Shigeya Suzuki at Keio Research Institute at SFC

# Agenda

- Overview of the session
  - Purpose
    - Give short presentation of overview on the trusted Internet that makes arbitrary data verifiable on the Internet, discuss and gather feedback.
  - Goal
    - To find partners to discuss it with.
- Positioning of the trusted Internet (5min.)
- Proposal of the trusted Internet (15 min.)
- Open discussion (30 min.)
- Wrap-up (5 min.)

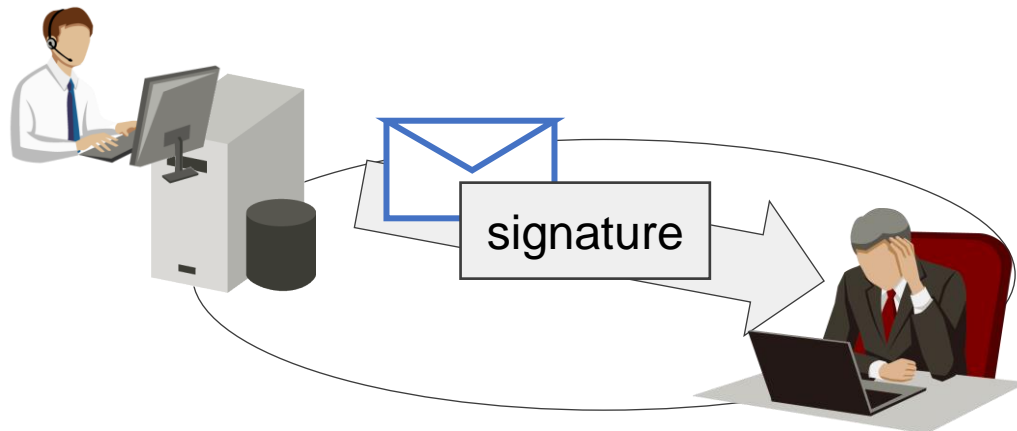
# Issue

- There is no way to confirm the credibility of data on the Internet



# Trust in Business

Verification of source authenticity



Prevention of spoofing and tampering

Verification with trusted people

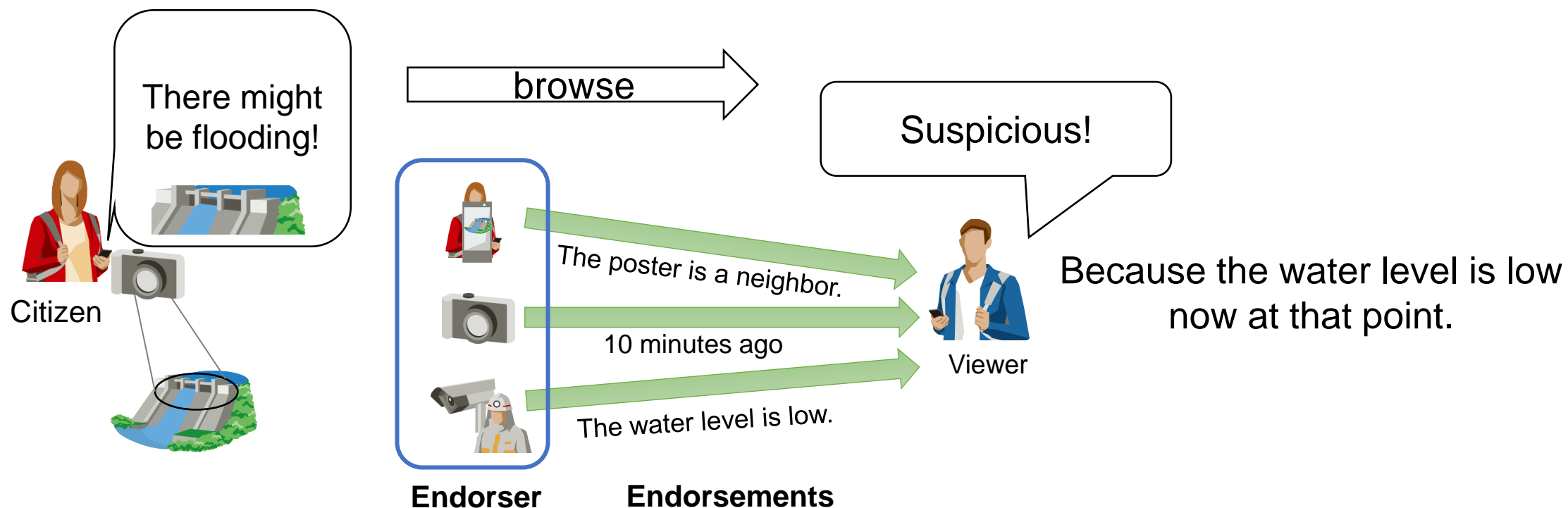


Relationships bring truth

**Need more ways to build trustworthy on anybody and anything**

# Our approach / Trusted Internet

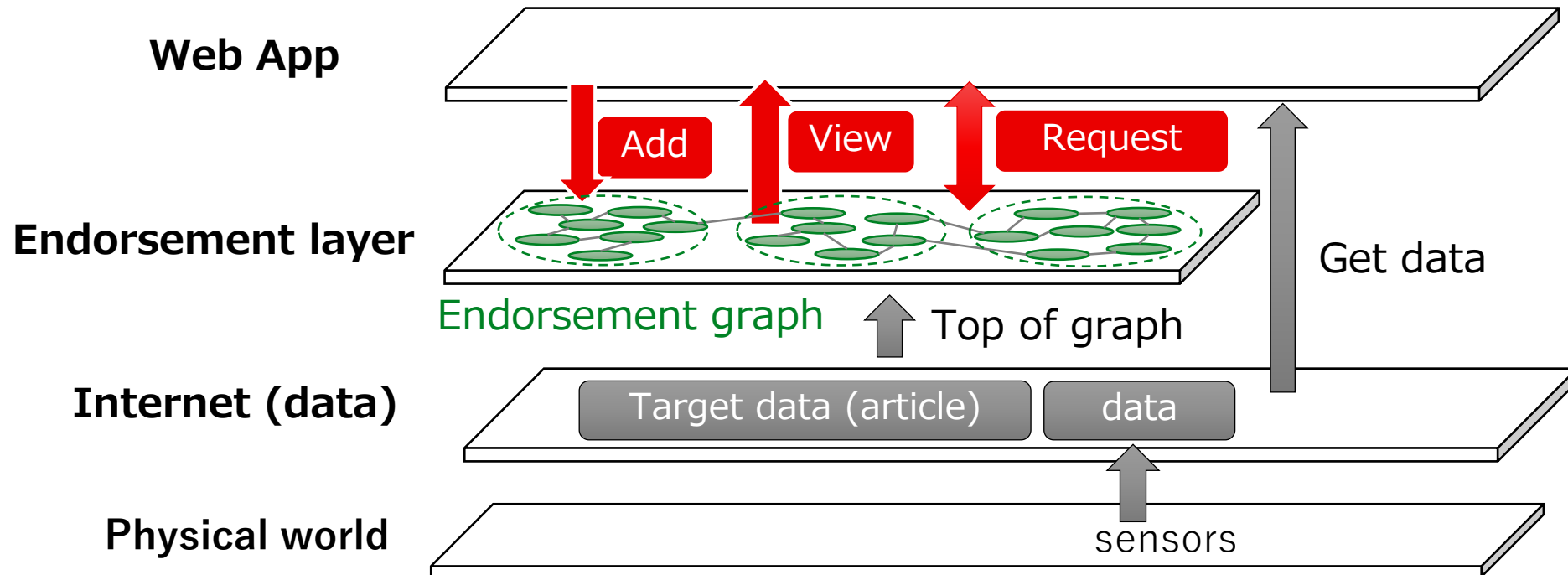
- Can provide endorsements to judge the credibility of this article



Humans and devices endorse the article from various aspects

# Architecture

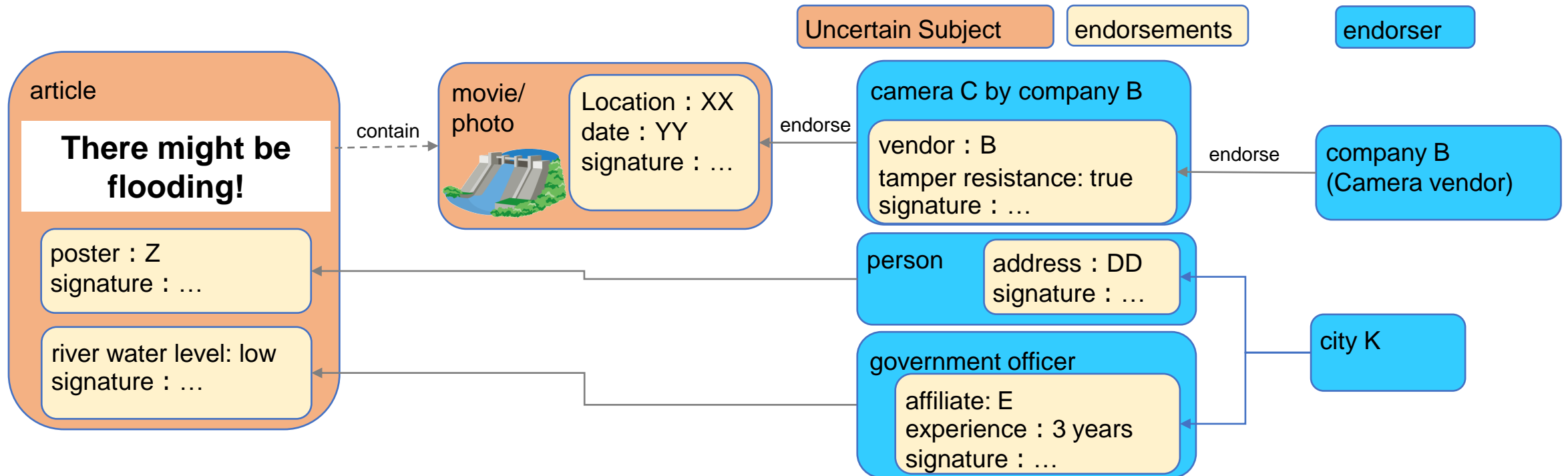
- Introduce an endorsement layer on the Internet



Can get endorsements for target data from the endorsement layer in the trusted Internet

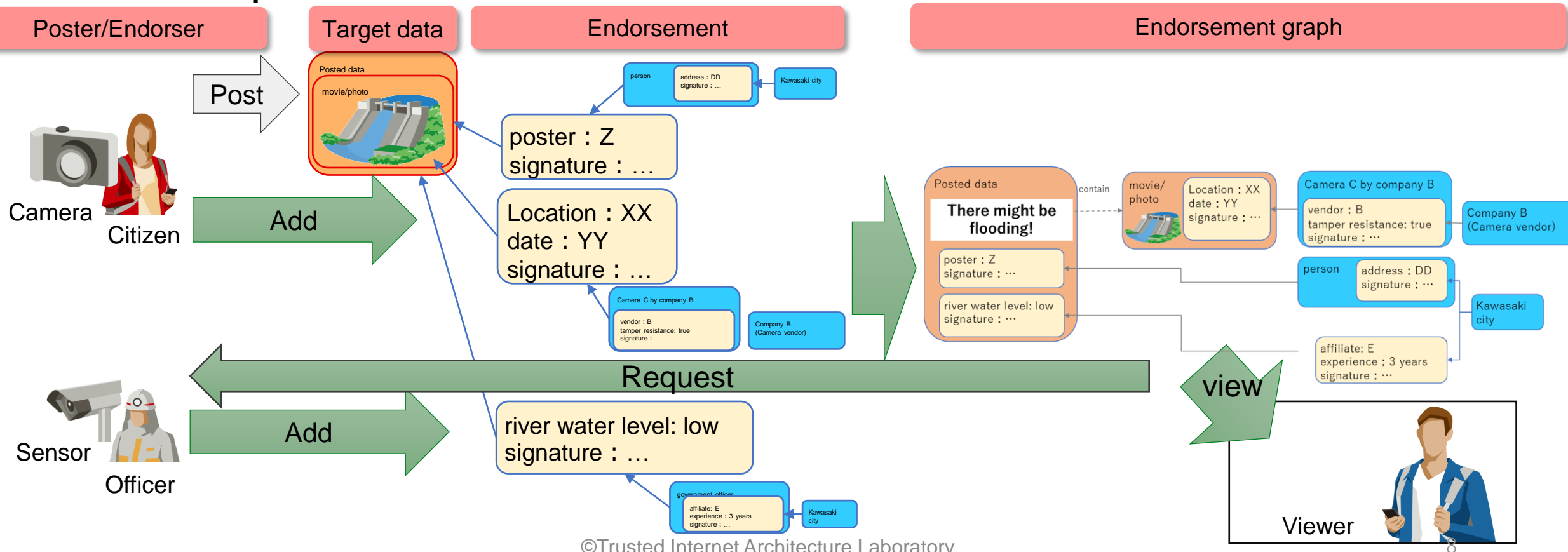
# Endorsement graph

- Endorsements on the endorsement layer constitute endorsement graph
  - Contains the relations between article, data and endorsements
  - Verifiable each endorsement with digital signature



# Generation of endorsement graph

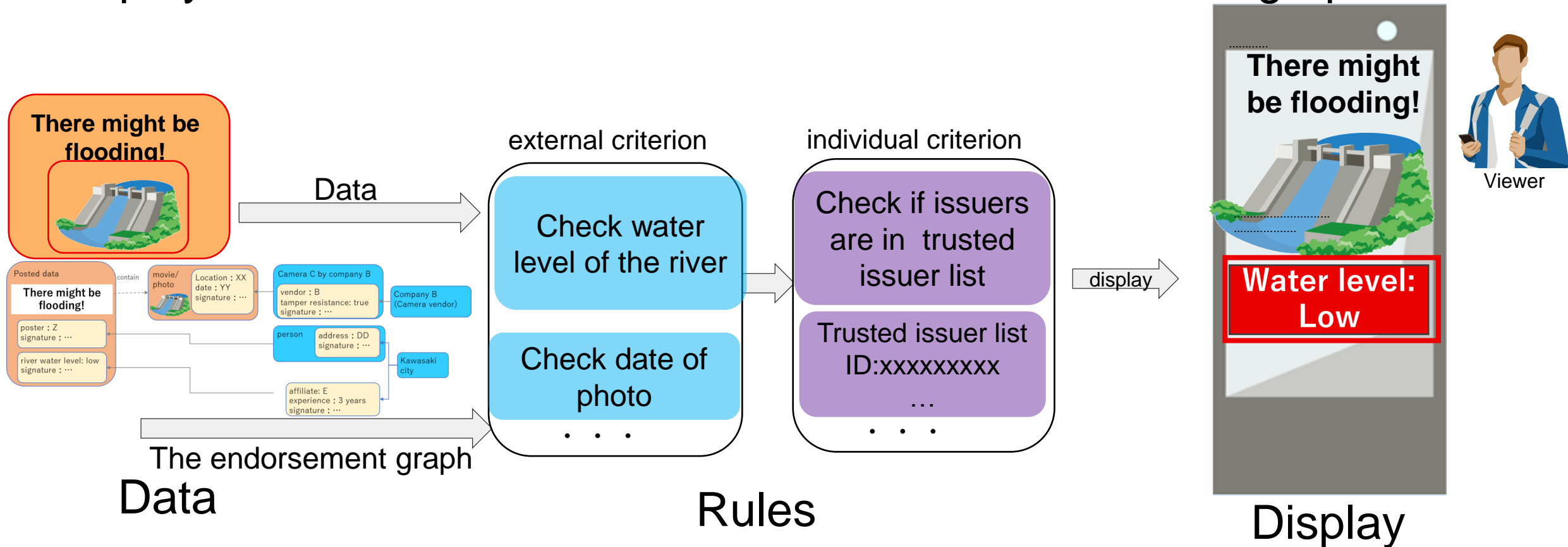
- Endorsers add endorsements in relation to the article at any time
- Viewers request additional endorsements if needed





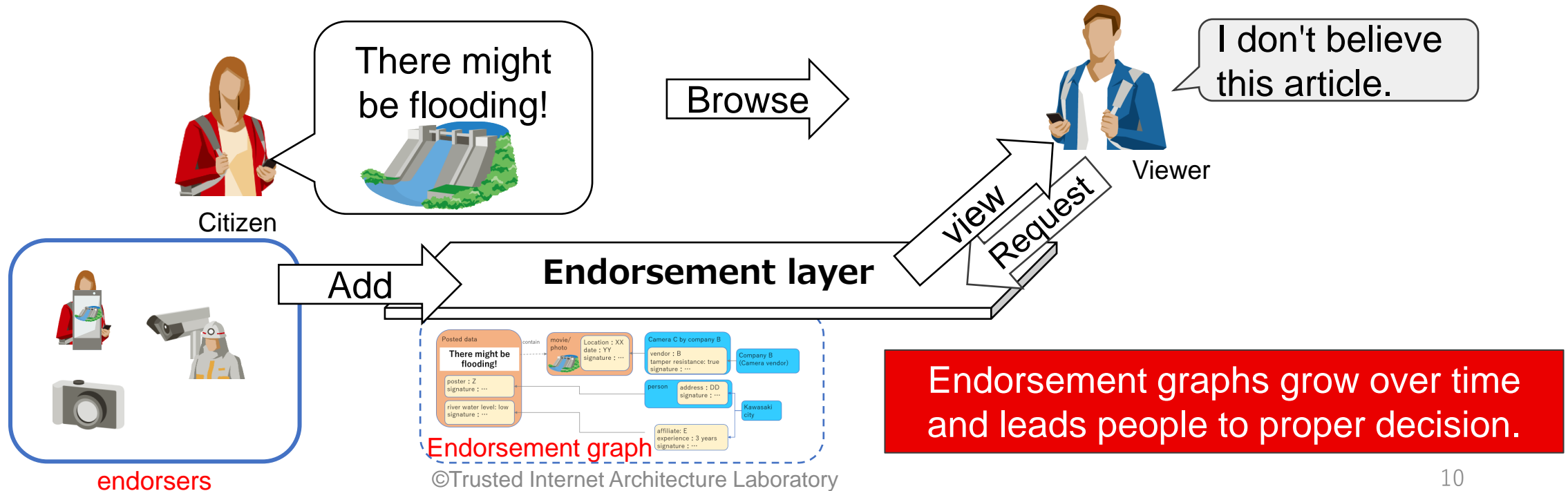
# Presentation of endorsement graph

- Display additional information based on the endorsement graph



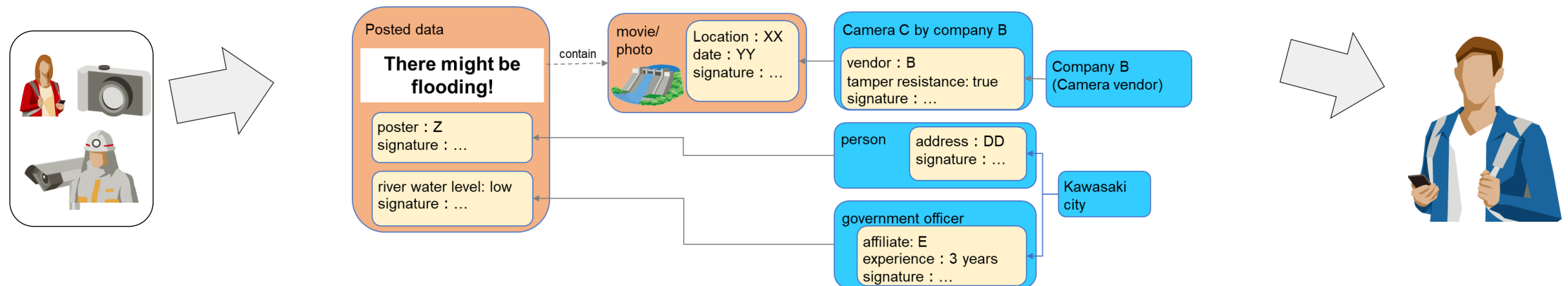
# Conclusion

- Trusted Internet helps people make proper decision with endorsements
  - Endorsements can be added to the endorsement graph anytime from devices on the real world



# Discussion

- Use cases, stake holders, related technologies, standards, similar activities?
  - Ex. W3C Verifiable Credentials, W3C Web of Things, W3C Web Annotation
- Ecosystem: Addition of endorsements
  - Mechanisms that encourage issuers to add endorsements (Rules/Technology)
- The others



# Thank you

TIAL (Trusted Internet Architecture Laboratory)

<https://www.kri.sfc.keio.ac.jp/en/lab/tial/>

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