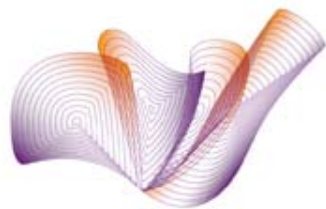


Shall I trust a recommendation?

(Towards evaluating trust in recommender sites)



novay

Gabriele Lenzini

Ynze Van Houten

Wolf Huijsen

Mark Melenhorst



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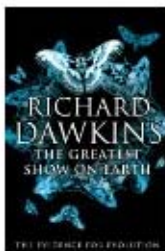
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[The Greatest Show on Earth: The Evidence for Evolution](#)

by Richard Dawkins (Sep 3, 2009)

Average Customer Review: [★★★★★](#) (2)

In stock

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[Irrationality](#)

by Stuart Sutherland (Jan 10, 2007)

Average Customer Review: [★★★★★](#) (30)

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RRP: £8.99

Price: **£6.99**

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[Bad Science](#)

by Ben Goldacre (April 2, 2009)

Average Customer Review: [★★★★★](#) (173)

In stock

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Price: **£3.60**

[26 used & new](#) from £3.45

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Happy End

A dramatic sky with large, bright white clouds and a dark, silhouetted horizon. The clouds are voluminous and appear to be illuminated from above, creating a strong contrast with the darker sky. The horizon is a solid black line, suggesting a silhouette of trees or a distant landmass. The overall mood is one of awe and mystery.

Is it **really** so bright?

Information CAN BE overwhelming

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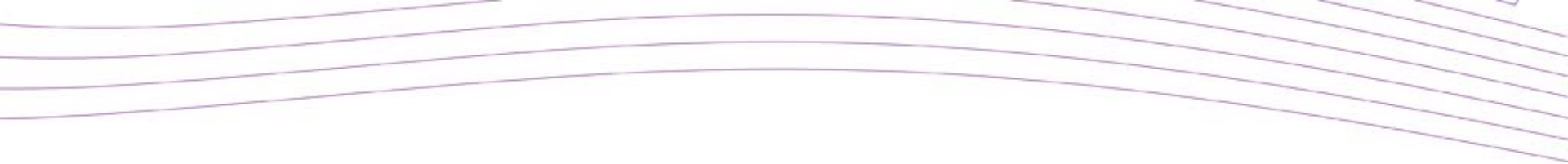
Information CAN BE misleading



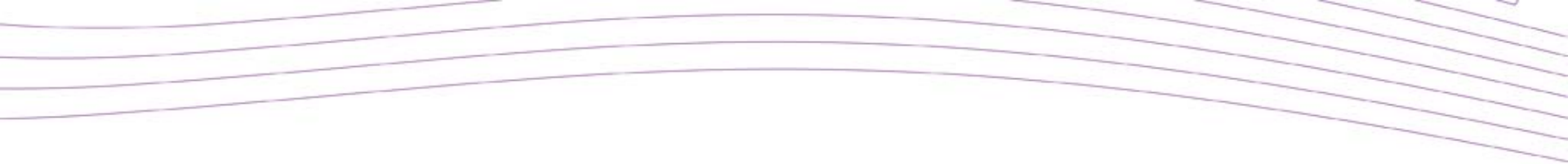


So what?

We need Trust



HCI studies proved that people
can have
(trust) relationships with ICT



*“Individuals can be induced to behave **as if** computers warranted human treatment, **although** users know that machines do not actually warrant this treatment”*

[Nass et al, ‘Can computer be team-mates?’, 1996]



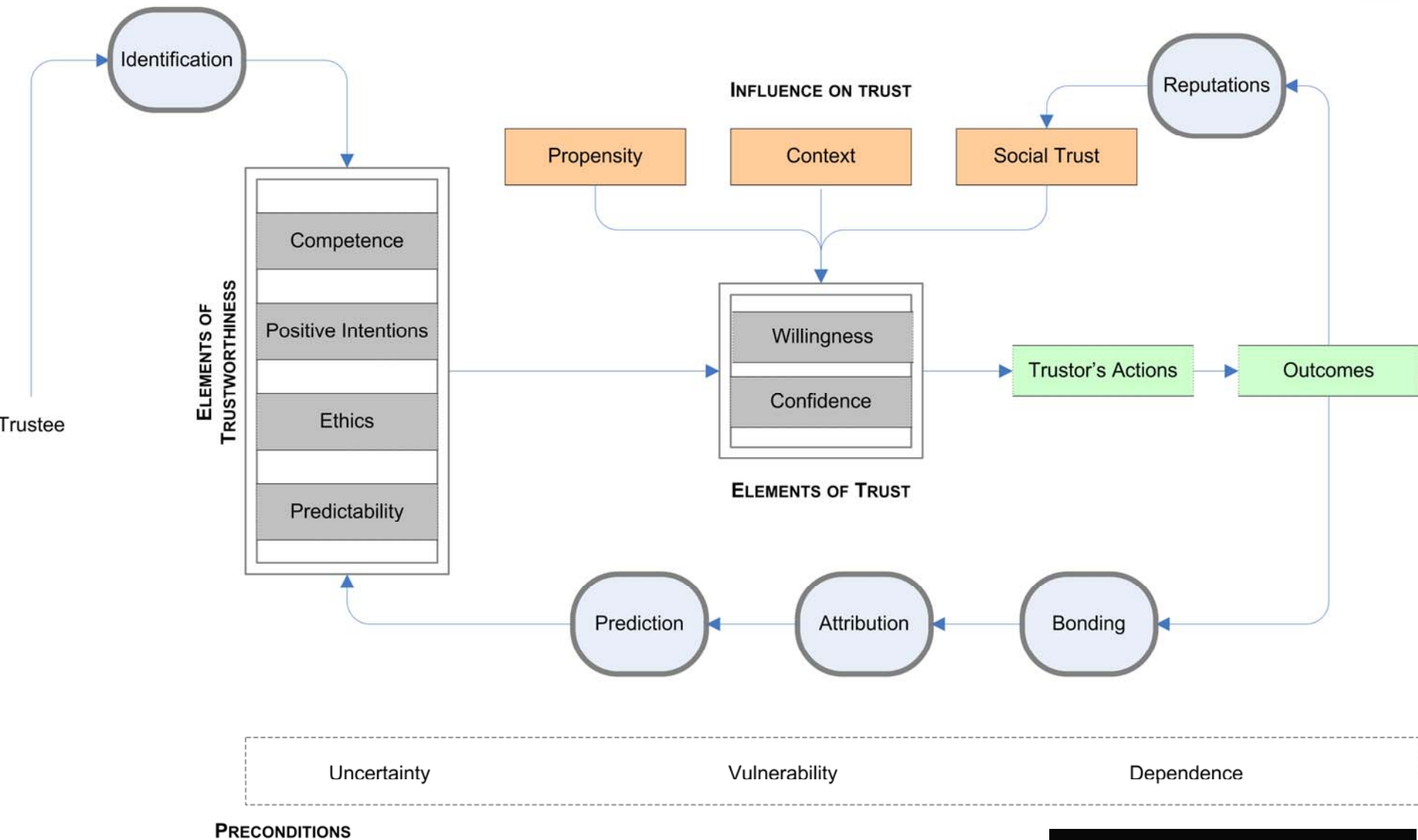
“Trust is the intervening variable that directly affect the use of a certain technology”

[Muir, ‘*Trust in automation?*’, 1997]



Quality ← **Trust** → **Usage**

Trust model for digital information

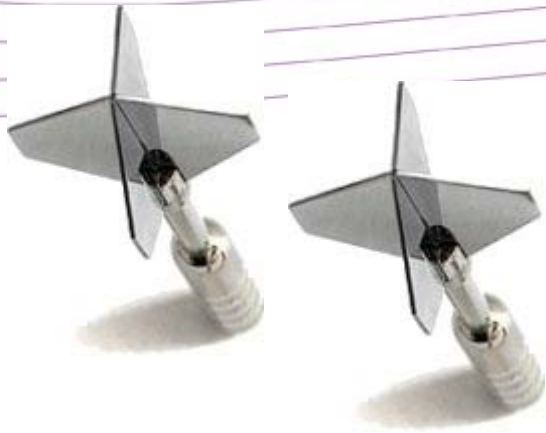




**Which is our
target?**



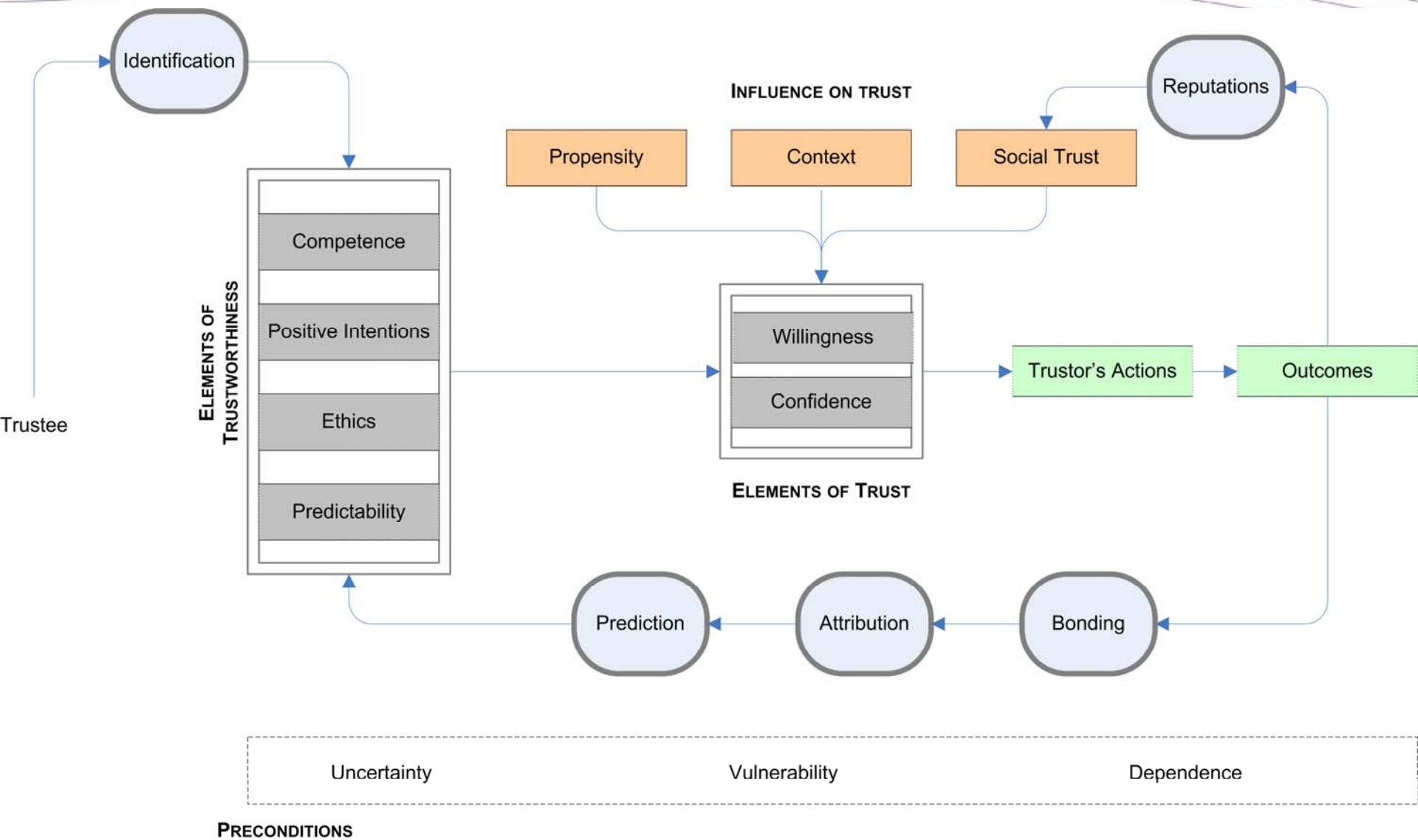
Understanding aspects
that influence the users'
perception of trust

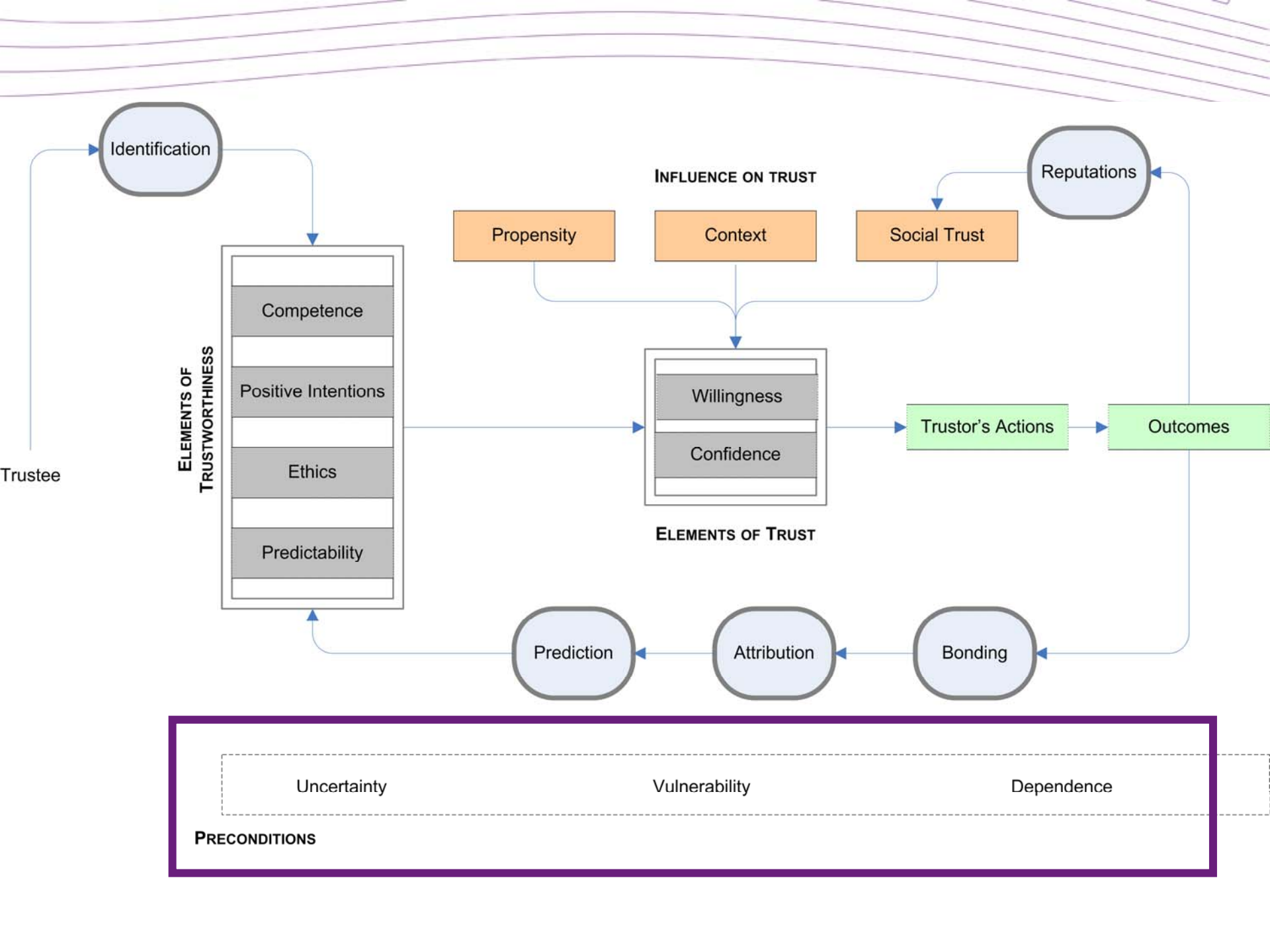


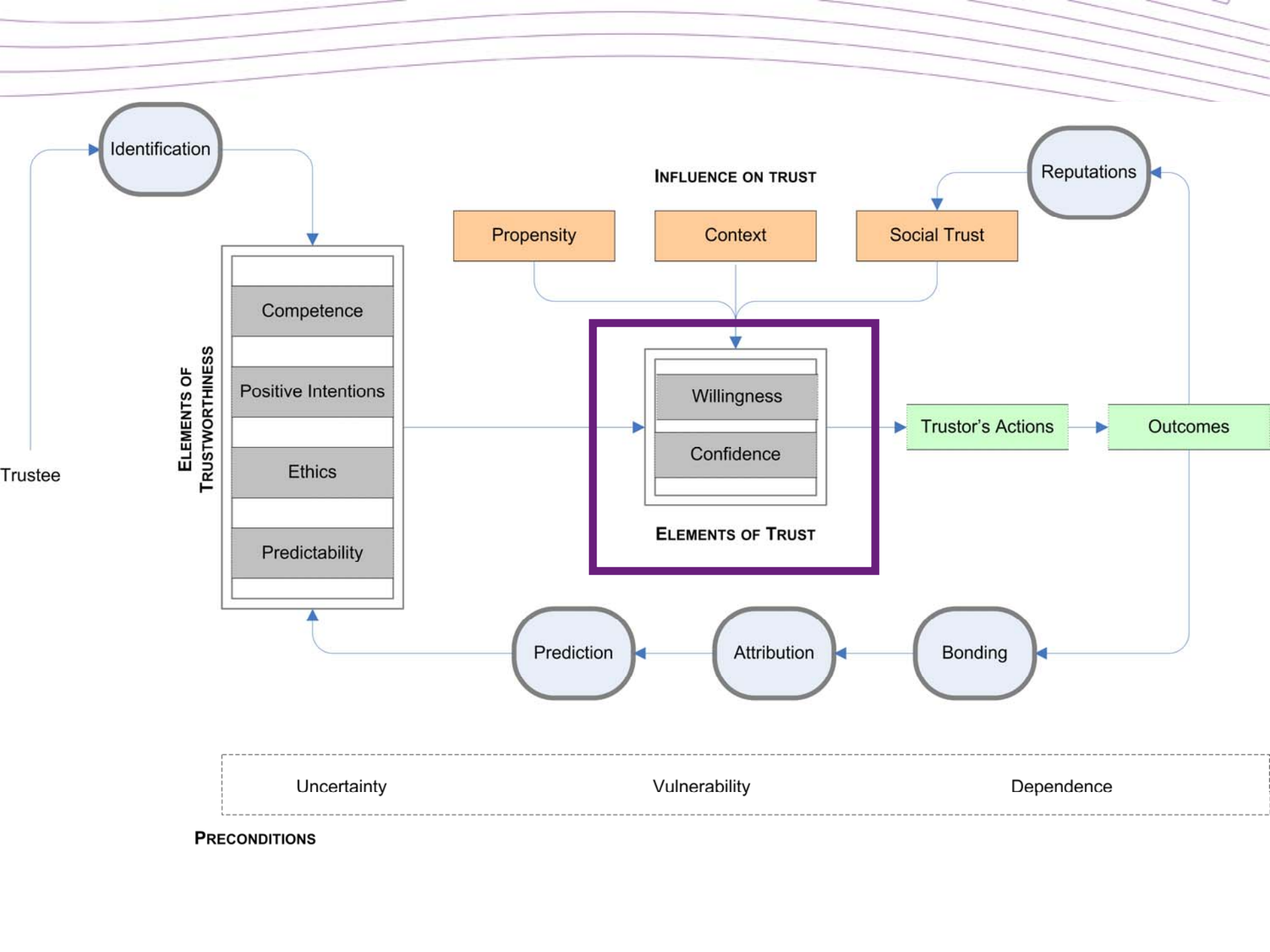
Defining a criterion for the **evaluation** of sites' **perceived trust**

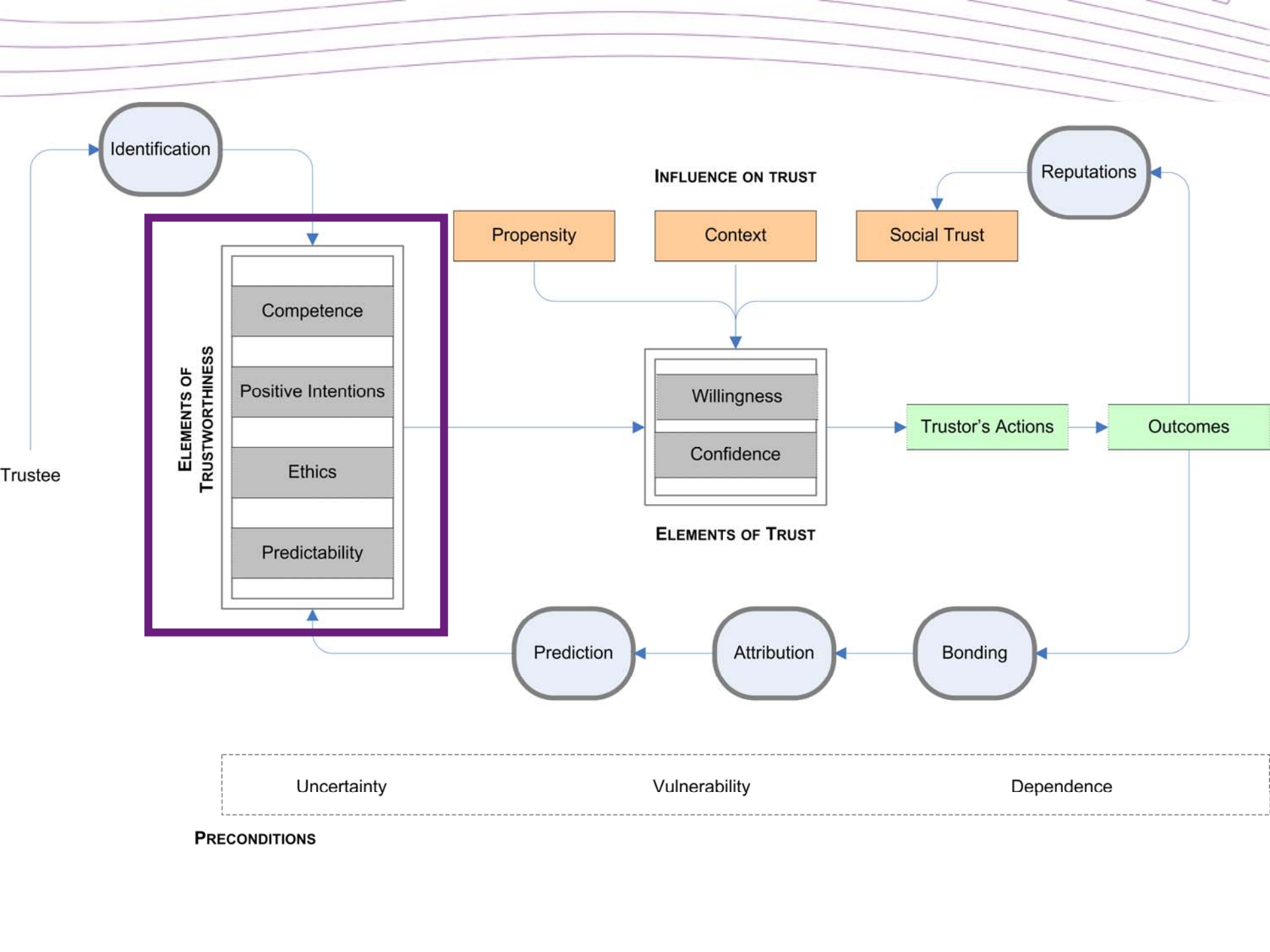


**Questions,
so far?**









Identification

INFLUENCE ON TRUST

Reputations

Propensity

Context

Social Trust

ELEMENTS OF TRUSTWORTHINESS

Competence

Positive Intentions

Ethics

Predictability

Willingness

Confidence

ELEMENTS OF TRUST

Trustor's Actions

Outcomes

Prediction

Attribution

Bonding

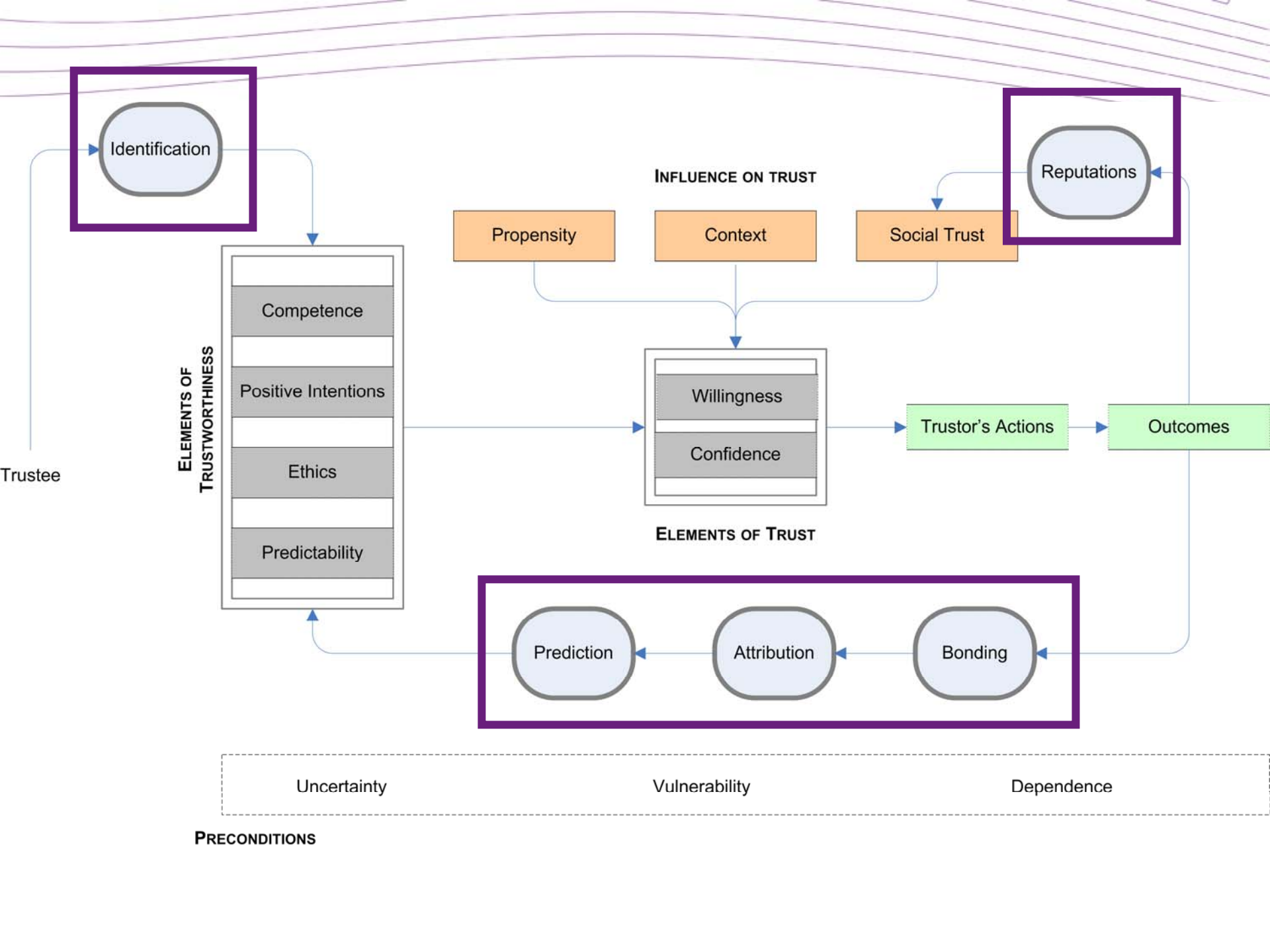
Uncertainty

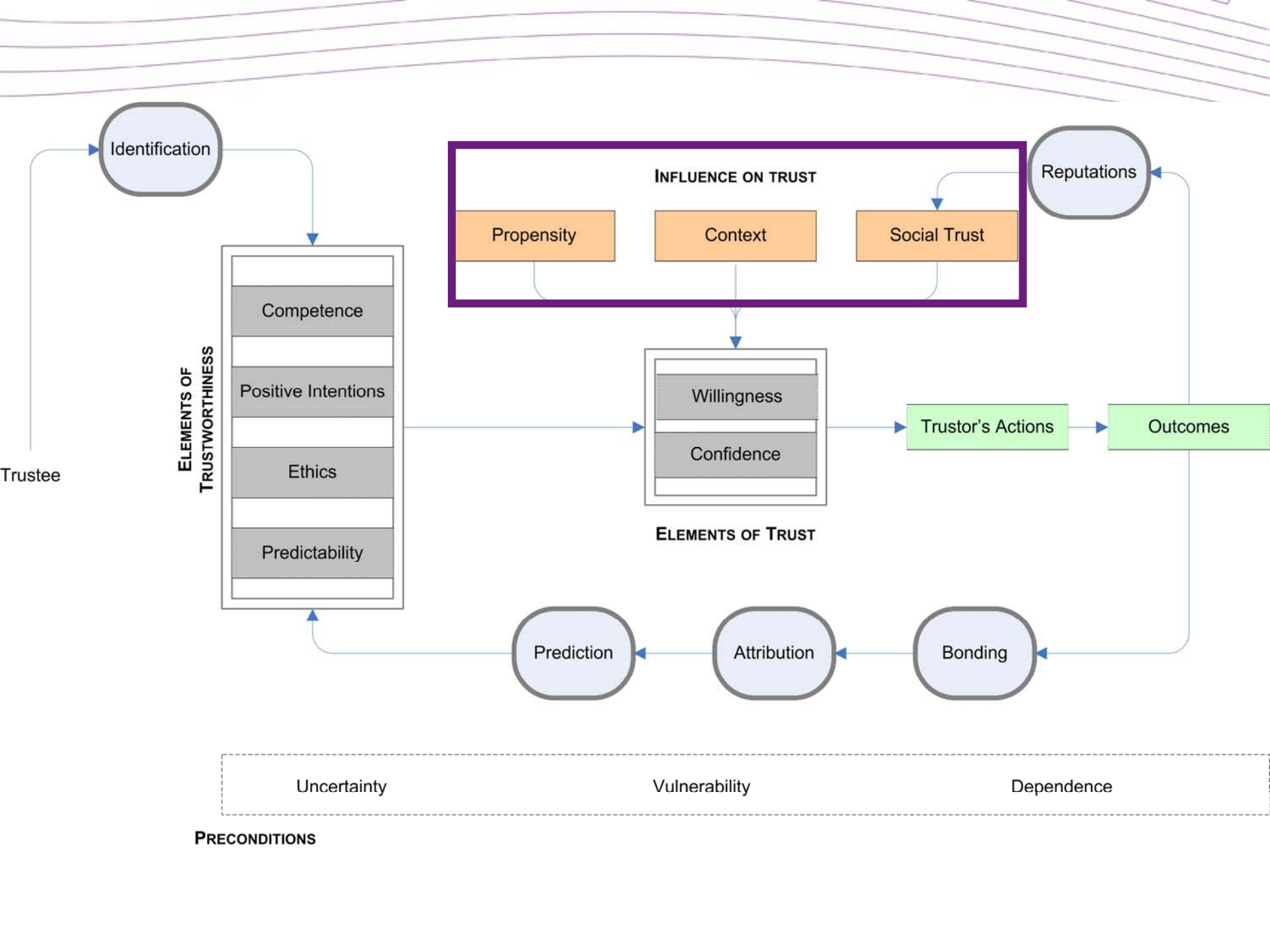
Vulnerability

Dependence

PRECONDITIONS

Trustee



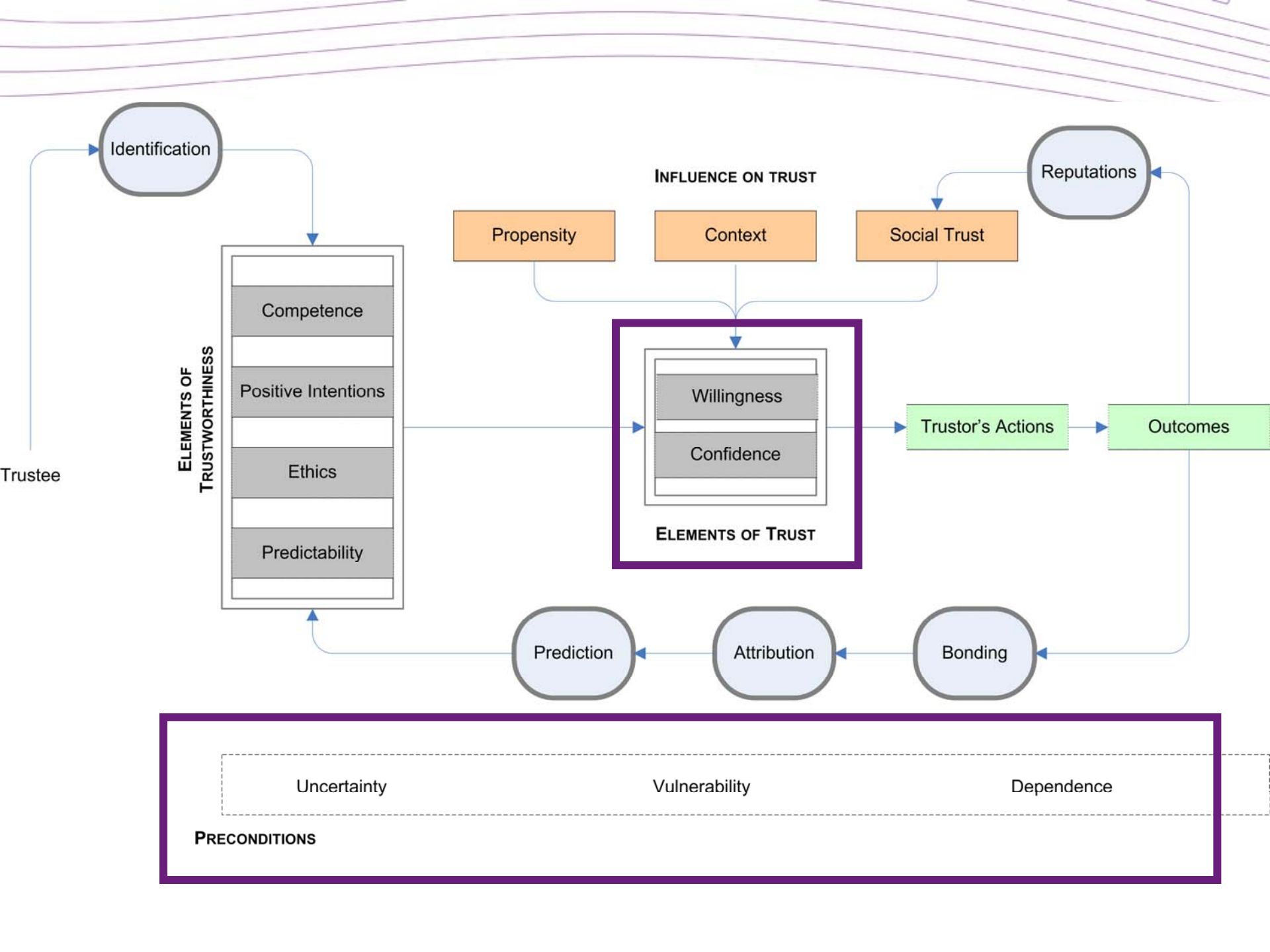




**Does Kelton's model
fit recommender sites?**



jā!



Our approach in evaluating trust in recommendations

1. User Interface
2. Linguistic content
3. Quality of recommendation/reviews



User Interface

Guidelines to a trust-inspiring **user interface** [Shneidermann, 2004]

- Patterns of past performance
- Reference of past / current users
- Show certification from third parties
- Easy to locate and read policies

What might affect
recommendations' perception of trust?
[Tseng and Fogg, 2004]

- First-hand experience
- Reputation of the reviewer
- Surface attribute (language)
- Stereotypes

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Apple iPod nano chromatic Black (8 GB) MP3 Player

Overall Rating: ★★★★★

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Product Rating: ★★★★★

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Apple iPod Nano 8GB Chromatic Black - So Slim & Light Yet Ready To Rock!

by [JDinP](#) (POPULAR AUTHOR) [Top 500](#), Jan 02 '09**Pros:** Light, slim, hold up to 2000 songs, great video playback, 2" screen**Cons:** Earbuds need to be upgraded

My son had been wanting an iPod for some time and I finally decided to plunk down \$149 for an Apple iPod Nano 8 GB in a shiny black color. For \$149 I expected a bigger box, but what I got was so small - I had a hard time believing ...

[Read the full review](#)Price Range: **\$103 - \$228**[COMPARE PRICES](#)



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Sort by

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Sort by

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Overall Rating:



Ease of Ordering:

NOT RATED

Customer Service:



On-Time Delivery:



Notification Services:



Search and Navigation:



Sense of Community:



eBay--Come On In, The Water's Fine!

by [erinroun](#) **TOP REVIEWER** in [Online Stores & Services](#), **POPULAR AUTHOR** - [Top 200](#), May 02 '02

I know what you might be thinking if you've never ventured over to **eBay**. *I can't possibly buy anything at eBay, I wouldn't know where to start.*

I'm here to assure you that you can both buy and sell, and enjoy it immensely....

[Read the full review](#)



Linguistisch Analysis

Analysis of Content? (Trust Indicators)

- Contact Information
- Grammar and Spelling
- Duplication
- Publication date
- Source of Reputation
- Subjectivity

Product Rating: ★★★★★

IMAC 2.4 Ghz 320 GB Hard Dirve

by [tble](#), Jan 19 '08

Pros: Great looking, fast, great screen. Takes up little desk space, easy to set up

Cons: Needs more memory, keyboard is a little small.

I love it. It really hums compared to my older IMAC. The only thing I would add is extra memory and maybe a wireless keyboard. I find that the keyboard is a little small. I added the extra 1g after about a month of use and it helped things out when using ...

[Read the full review](#)

Price Range: \$1080 - \$1080

COMPARE PRICES

Product Rating: ★★★★★

Perfect Design, Great Performance

by [cml67](#), Jan 08 '08

Pros: Perfect design, great performance and reliability, very user-friendly

Cons: none

After working with a PC computer for 7 years, I finally decided to switch back to Mac, and it was one of the best decisions I've made in a long time. First of all, the design is a dream. With my old PC, half of my desk was cluttered with cables, and ...

[Read the full review](#)

Price Range: \$1080 - \$1080

COMPARE PRICES

Automatic Analysis of Content?

- Contact Information
- Grammar and Spelling
- Duplication
- Publication date
- Source of Reputation
- Subjectivity

[Martin M.,

'Reliability and Verification of Natural Text on the WWW', 2005]

Automatic Analysis of Content?

- Contact Information
- Grammar and Spelling
- Duplication
- Publication date
- Source of Recommendations
- Subjectivity

[Virgin Griffith, 'WikiScanner', 2007]

“WikiScanner, makes it possible to figure out which organization made which edits to a Wikipedia entry by cross-referencing IP addresses with a database of IP address owners” [NY times, 2008]

Automatic Analysis of Content?

- Contact Information
- Grammar and Spelling
- Duplication
- Publication date
- Source of Recommendations
- Subjectivity

[*Vox Populi.nl*, 2007]



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Over de Vox-Pop

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Jaaroverzicht 2008



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4 september 14:12:14 - 2 bronnen



TOMTOM GEWILD OP VRIENDELIJK DAMRAK

4 september 8:54:34

De Telegraaf

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Quality of Recommendations

Quality of Recommendations (Trust Indicators)

- Better understanding of users
- Robustness
- Multi-criteria ratings
- Recognition of Roles
- Rewards mechanisms
- Personalization
- Web-of-Trust

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"Highly recommend"

Aug 11, 2009 - nzsuze

"It was comforting to know that at the end of a long day, we had a place to go to that was almost like home."

Jul 18, 2009 - calebsmomMontreal

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 88% recommend

€35* Dodo Hotel
 72% recommend

Commentaire du 07/04/08 par Titia84 | Entre 20 et 25 ans | ♀

Présentation : ★★★★★☆ Points forts
Texture : ★★★★★☆ -odeur très agréable
Pénétration : ★★★★★☆ -sensation de fraîcheur lors de l'application
Efficacité à court terme : ★★★★★☆ -pénètre facilement
Efficacité à long terme : ★★★★★☆ -bonne hydratation
Odeur : ★★★★★★ -flacon pompe pratique

Points faibles
je vois pas vraiment

Commentaire
Pour moi c'est un bon produit qui laisse la peau fraîche et hydrater, et j'aime beaucoup l'odeur, ca sent très bon

Note globale : ★★★★★☆

Présentation : ★★★★★☆ Points forts
Texture : ★★★★★★ -
Pénétration : ★★★★★☆ Points faibles
Efficacité à court terme : ★★★★★☆ Pénétration assez lente
Efficacité à long terme : ★★★★★☆ Commentaire
Odeur : ★★★★★★ -
Rapport qualité/prix : ★★★★★★ -
Note globale : ★★★★★★

Présentation : ★★★★★☆ Points forts
Texture : ★★★★★☆ Sensation de fraîcheur et odeur agréable
Pénétration : ★★★★★☆ Points faibles
Efficacité à court terme : ★★★★★☆ Pas assez hydratant
Efficacité à long terme : ★★★★★☆ Commentaire
Odeur : ★★★★★★ -
Rapport qualité/prix : ★★★★★☆ -
Note globale : ★★★★★☆

Commentaire du 02/04/08 par caphini | Entre 20 et 25 ans | ♀

Sexe : Femme ♀
Age : Entre 20 et 25 ans
Inscription : 21/01/08 00:24
Type de peau : Mixte
Déshydratation : Forte
Cheveux : Colorés
Commentaires : 2 > Voir tous ses avis
Localisation : FRANCE (Seine-et-Marne)
(Carte)
Message privé : Envoyer un MP
Ajouter au carnet
Fermer

Commentaire du 30/03/0

Commentaire du 26/03/08 par poupée45 | Entre 20 et 25 ans | ♀

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wsmunch	ADVISOR	Very Helpful	Oct 24 '05
xiphoid	ADVISOR	Very Helpful	Oct 24 '05
telecomman	ADVISOR	Very Helpful	Oct 24 '05
tennis_player	ADVISOR	Very Helpful	Oct 24 '05
cntaur5	ADVISOR	Very Helpful	Oct 25 '05
alexanderaku	ADVISOR	Very Helpful	Oct 31 '05
sweeper	ADVISOR	Very Helpful	Nov 01 '05
jwhitakr	ADVISOR	Very Helpful	Oct 23 '05
jeremy1456	ADVISOR	Very Helpful	Oct 23 '05

- ▶ [View all member ratings for this review](#)

ensive digital camera that provides great photos then this is for you.

ind the bay. My in law had just bought their very first digital camera (this **Canon** s to their computer. Basically I had the whole weekend with this camera and taught plus tax.

n camera died and they like the digital idea better. They also liked the idea that they re these pictures quickly and easily was also another reason.

al viewfinder. The image that you see on the LCD will be what gets captured and le picture that will get captured (it only shows about 80 to 85 percent or the image). I :ry life. The LCD on this camera has 120,000 pixels resolution which is bright and clear

About the Author



Epinions.com ID:
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Web of Trust

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Conclusion: preliminary check list

User Interface	Content Analysis	Recommendations
Certification from trusted parties; Management info; Past reviews patterns; References from past and current users; Offer/Compare reviews; Source of reviews easy to check; Reputation of the reviews managed.	Contact info; Grammar/Spelling; Duplication; Publication date; Source reputation; Subjectivity.	Robustness; Multi-criteria reviews; Recognition and roles; Rewards mechanisms; Personalization; Web-of-Trust.

Future work

- Validation is required
- How to quantify?
- How to visualize the results?

- What is the effect on the purchasing
- How to incorporate indicator in current web sites?



Q?



Thx