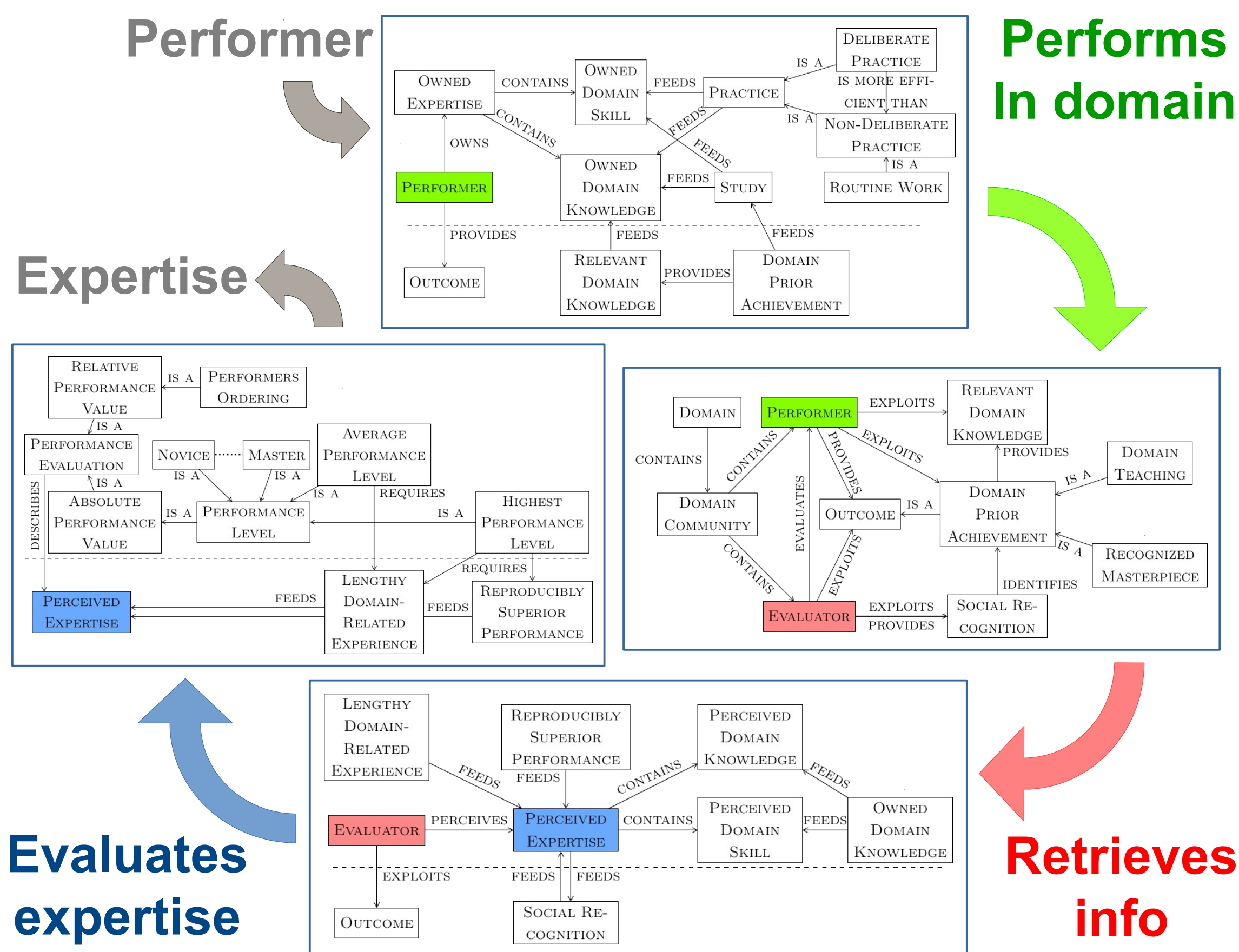


## PROBLEM and OBJECTIVE

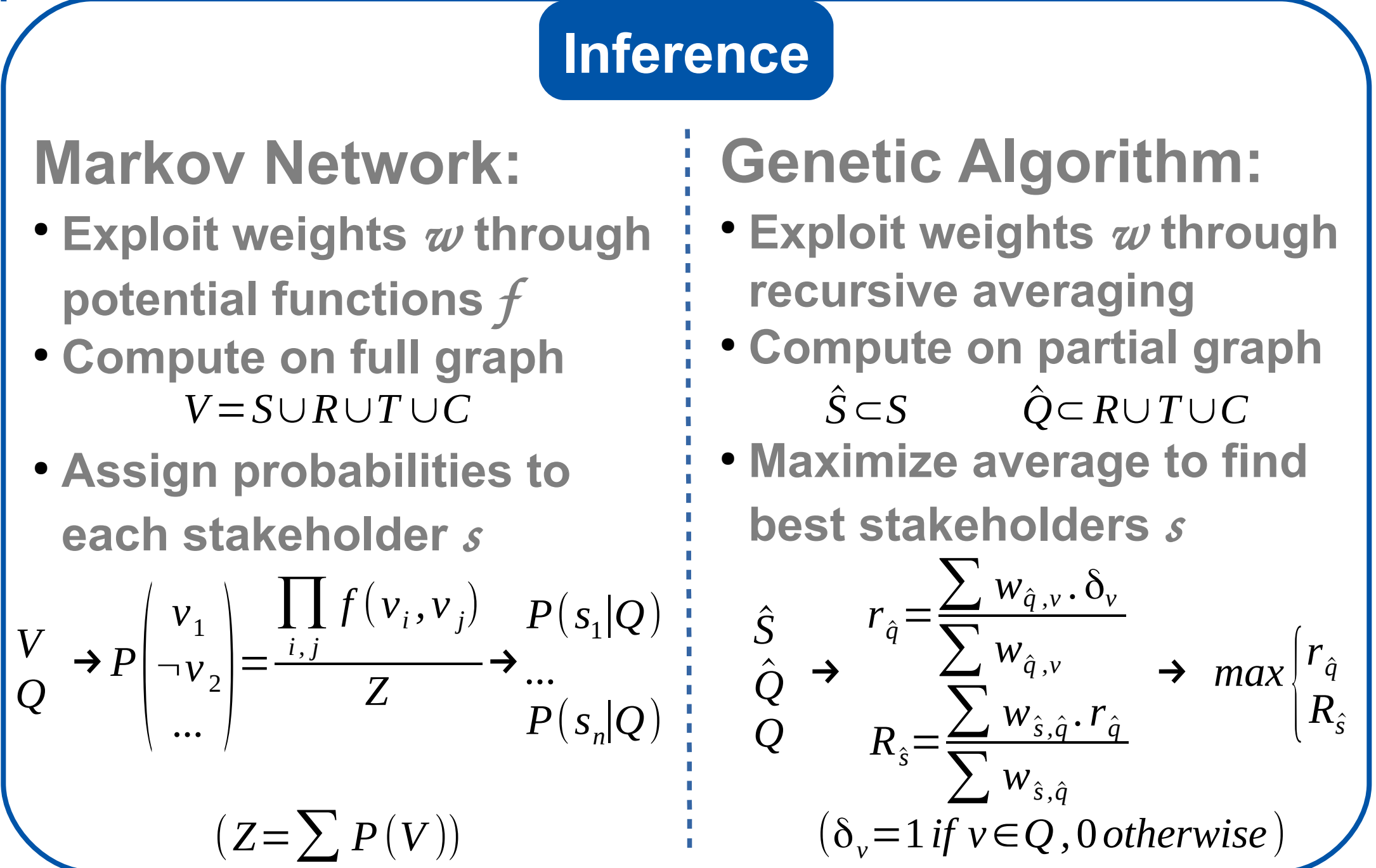
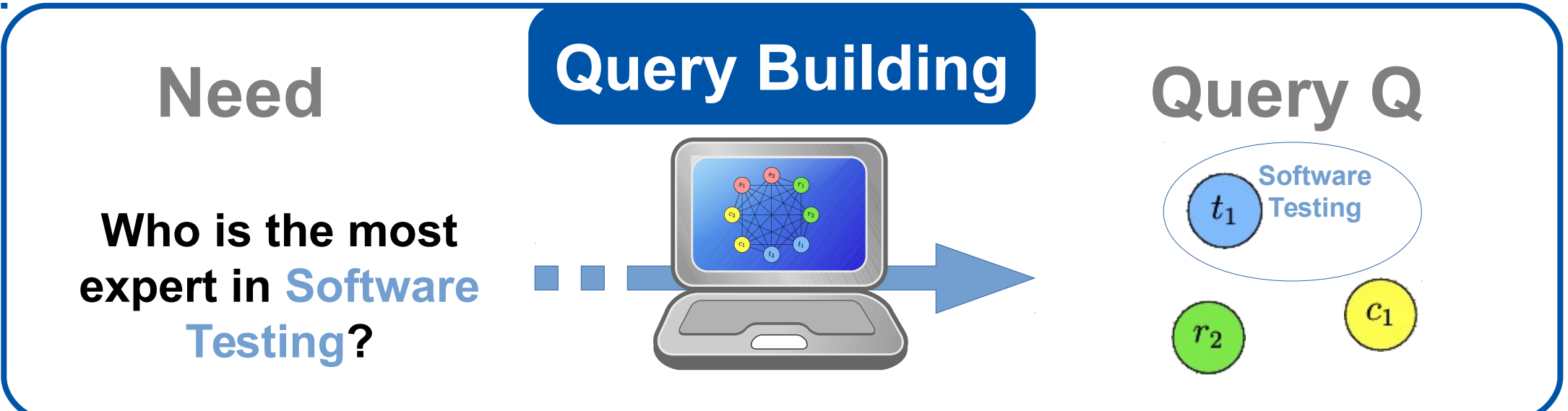
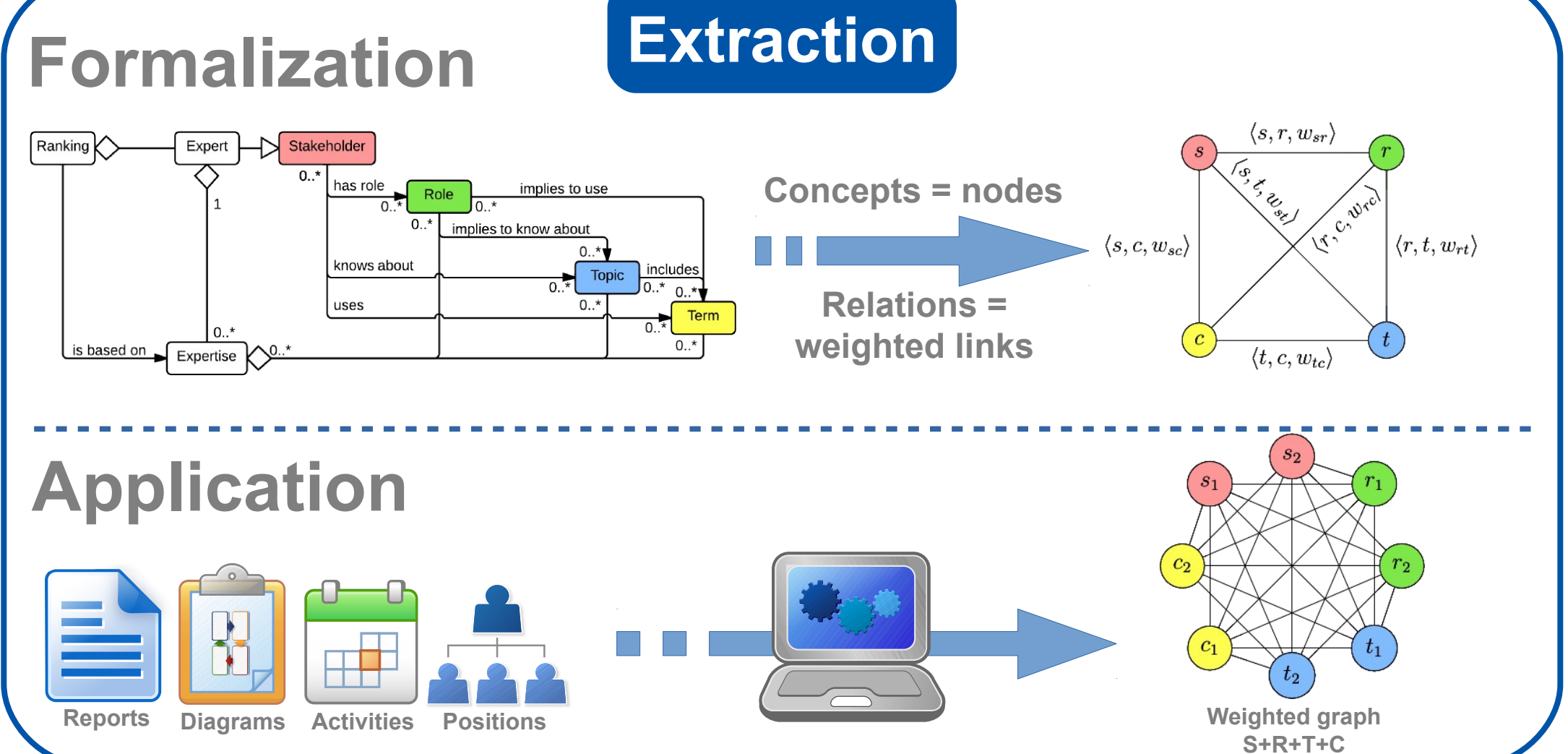
Requirements elicitation and refinement require expert-like information, but current research in RE does not focus much on sources of information, and otherwise experts are not targeted.

We aim at investigating further the evaluation of expertise based on usual RE indicators: knowledge evidences (terms & topics) and social recognition (roles).

## EXPERTISE METAMODEL



## EXPERT FINDER



## RANKING FORMALIZATION

### Two Representations

Ranking	Ordering
1: $s_1$	$s_1 > s_2$
2: $s_2, s_3$	$s_1 > s_3$
3: $s_4, s_5$	$s_2 ? s_3$
4: $s_6$	$s_2 > s_4$
...	...

### Group Centroid

$O_1$	$O_2$	$O_3$	$c(O_1, O_2, O_3)$
$s_1 > s_2$	$s_1 > s_2$	$s_1 > s_2$	$s_1 > s_2$
$s_1 > s_3$	$s_1 < s_3$	$s_1 < s_3$	$s_1 < s_3$
$s_2 ? s_3$	$s_2 ? s_3$	$s_2 ? s_3$	$s_2 ? s_3$
$s_2 > s_4$	$s_2 ? s_4$	$s_2 < s_4$	$s_2 ? s_4$
...	...	...	...

### Disagreement Distances

$s_1 > s_2$	$s_1 > s_2$	$\rightarrow A(\text{agree})$
$s_1 > s_2$	$s_1 < s_2$	$\rightarrow D(\text{disagree})$
$s_1 > s_2$	$s_1 ? s_2$	$\rightarrow U(\text{undifferentiated})$

$$\text{Disagreement Distance} = \frac{D}{A+D}$$

$$\text{Optimistic DD} = \frac{D}{A+U+D}$$

$$\text{Pessimistic DD} = \frac{U+D}{A+U+D}$$

### Compliance Measures

$O$	$R(\text{ref})$
$s_1 > s_2$	$s_1 > s_2$
$s_1 > s_3$	$s_1 > s_3$
$s_2 > s_3$	$s_2 ? s_3$

$$\text{TotalComp}(R, O) = \frac{\text{Shares}(R, O, >) + \text{Shares}(R, O, ?)}{\text{Orders}(R, >) + \text{Orders}(R, ?)}$$

$$\text{OptimComp}(R, O) = \frac{\text{Shares}(R, O, >) + \text{Orders}(R, ?)}{\text{Orders}(R, >) + \text{Orders}(R, ?)}$$

$$\text{OrderComp}(R, O) = \frac{\text{Shares}(R, O, >)}{\text{Orders}(R, >)}$$

## EVALUATION

	Assumption	MN	GA
No data	Everyone at same rank	☹	☺
No query	Everyone at same rank	☹	☺
Composition	Common orders between Q1 and Q2 retrieved with Q1+Q2	☺	☺
Expected	Comply with human-made ranking	Synthetic ☺ Real small ☺ Real big ☹	Synthetic ☺ Real small ☺ Real big ☹

## REFERENCES

M. Vergne, I. Morales-Ramirez, M. Morandini, A. Susi, and A. Perini, 'Analysing User Feedback and Finding Experts: Can Goal-Oriented Help?', in 6th International i\* Workshop, Valencia, Spain, 2013. [http://ceur-ws.org/Vol-978/paper\\_9.pdf](http://ceur-ws.org/Vol-978/paper_9.pdf)

I. Morales-Ramirez, M. Vergne, M. Morandini, A. Siena, A. Perini, and A. Susi, 'Who is the Expert? Combining Intention and Knowledge of Online Discussants in Collaborative RE Tasks', in 36th ICSE, Hyderabad, India, 2014. DOI: 10.1145/2591062.2591103

M. Vergne and A. Susi, 'Expert Finding Using Markov Networks in Open Source Communities', in 26th CAISE, Thessaloniki, Greece, 2014. DOI: 10.1007/978-3-319-07881-6\_14

M. Vergne and A. Susi, 'Breaking the Recursivity: Towards a Model to Analyse Expert Finders', in 34th ER, Stockholm, Sweden, 2015. DOI: 10.1007/978-3-319-25264-3\_40