

Social Networks for Stakeholder Identification & Analysis

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Group 1

Context - Social Computing

- **Benefits**

- Potential of unstructured collaboration on large, distributed scale possible
- Possible involvement of a vast number of users & insights → high innovative power
- Possible low costs to access and profit from a large user base

- **Limitations**

- No unified language to create social computing software
- Threats like fake reporting, trust issues, etc.
- Incorporating all possible, global legal aspects challenging
- Motivation to collaborate neither given nor enforceable

Context - Social Computing

- **Lack of existing social software to support RE**
 - Barely possible to ensure confidentiality of uploaded data and shared ideas
 - Capturing stakeholders outside “friends”/“followers” lists difficult
 - Collaboration may barely be enforced
 - No obligation to have an account
 - Identities are not checked and may be fake
 - Legal aspects may restrict data to be shared
 - Context and boundaries identification may be difficult
 - ...

StakeNet

- **3 main steps**

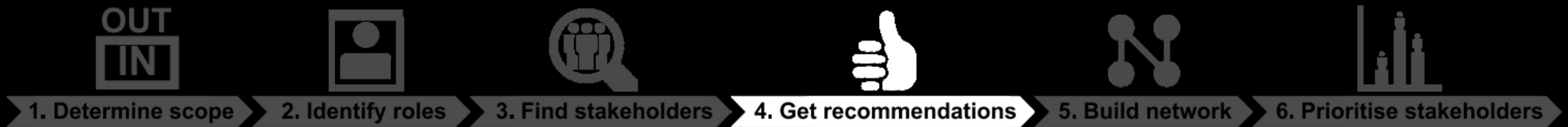
1. Identify Stakeholders and Recommendations
2. Build social network
3. Prioritise stakeholders
 - with social network measures

StakeNet



1. Sets the projects **scope** and **boundaries**
2. Identifies an initial set of stakeholder **roles**
3. Find **stakeholder(s)** for each role
 - Either person who was initially identified ...
 - ... or person/group representative nominated by that person

StakeNet



4. For each stakeholder, get their stake & recommendation

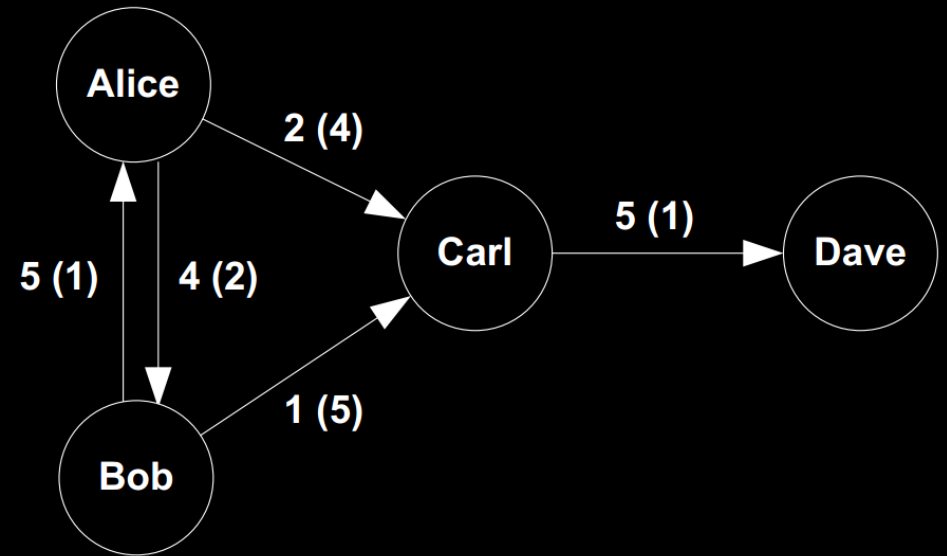
- E.g. semi-structured **interview** of each stakeholder
- **Recommendation** = <Stakeholder, Stakeholder role, Saliency>
 - Saliency = project influence power, legitimacy & urgency of claims
- **Repeat** step 4 for each stakeholder → **Stop** when no additional roles are identified
 - **Snowballing** technique

StakeNet



5. Draw the **social network**

- **Nodes** = stakeholders
- **Directed edges** = recommendations
- **Edge weights** = Saliency (reversed order of saliency)



StakeNet



6. Prioritise stakeholders using social network measures

- **Measures:**

- Betweenness, Closeness, Degree, In-Degree, Out-Degree Centrality
- PageRank

- **Result:** 2 ranked lists for each measure:

- Prioritised stakeholder roles
- Prioritised stakeholders

- Combination of multiple measures possible

Experiences & Lessons Learned

- **Operational Independence**

- Little training required
- Prioritising feature useful
- well suited for collaborative projects
- less suited for high security domains

- **Managerial Independence**

- Limited amount of centralised control & authority
- Better results when an **authoritative person** supports the usage

Experiences & Lessons Learned

- **Evolutionary Development**

- “Unsubscribe” feature: reveals stakeholders status
- Users barely keep their information up to date: how to incentivise?

- **Emergent Behaviour**

- Suited for systems needs that emerge over time

- **Geographical Distribution**

- Web-based: well suited for multi-location support
- Automated elicitation = significant time saving
- Problems: differing cultural/social conventions