Effect Mapping

David Evans

BCS SPA 2012 conference, 3 July 2012

Introduction

EM is an agile scope management technique that addresses such issues as:

- Misaligned expectations
- Micromanagement
- Lack of visibility
- Losing sight of the Big Picture
- User Story Hell

People who ask for control are really asking for visibility – Elisabeth Hendrikson

People desire visibility of decisions, assumptions, priorities. Other stakeholders would like to be fully aware of what the team is doing and where it is going.

No Big Picture leads to issues such as scope creep, pet features, "how" without "why", "requirements" that are really designs.

User Story Hell is described by Mike Bateman as stories without content – too many unknowns – not the right level of abstraction. The large backlog provides a false sense of security, but the stories in it are actually not much use. They may not even address the original problem.

Jeff Patton talks about a "bag of leaves" lacking the tree they grew on – too many fine-grained stories; hard to prioritise strategically, good for pigs and bad for chickens. Is the wing mirror higher priority than the indicator?

What does Effect Mapping do?

Question 1 is always "why"? Why spend money? Why now? Is it worth the risk? This is always considered in the light of the goal you're trying to achieve.

Question 2: "who"? Who matters in the context of the goal? Who cares about it? Who can help / hinder?

Q3: "how"? How do / could / might they affect (promote / hinder / prevent) the achievement of the goal?

Q4: "what"? What can WE do about that to increase / decrease the effects identified above?

Levels

Level 1: the goal

Level 2: the stakeholders

Level 3: activities of the stakeholders

Level 4: team actions, including selection of software features (epics, in story-mapping terms)

Origins

- Gibb, Weisbord & Drexler (1960s) on managing meetings effectively
- "Effect Managing IT" by Ottersten & Balic (only a very bad English translation available)
- Gojko Adzic has summarised the book in about 10 pages. There is also a nice white paper available from http://gojko.net/papers/effect_maps.pdf.

Related ideas

- Feature Injection (Chris Matts)
- Stakeholder Values and Product Qualities (Tom Gilb)
- Story Maps (Jeff Patton)

Positive Aspects of Effect Mapping

- Lightweight
- Scalable
- Very flexible in use

Exercise – Pay and Display Car Park Operator

Lessons:

- Choice of goal and timeframe is crucially important
  - One step down from "increase profits" is usually best
- Identifying stakeholders requires the correct context
  - Usually external, but not always
- The task looks superficially simple, but it takes skill

Next task: Compare solutions to the problem with another group. Discuss differences. Look for how the goal was expressed and depth/width of stakeholder groups.

- It helps to use flexible media for the effect mapping exercise (cards or post-its)
- Focus on a small number of key stakeholders
  - Don't ignore "spanner-in-the-works" factions

- Don't confuse goals with measures – "phase out ticket machines" is not a goal but a means to that end
- Don't assume that "all the thinking has been done" when the objectives are given to the project
  - Improving the security might be another viable way forward

How can we use the mapping in our job?

Challenging requirements is one important lesson. Customer often expresses requirements as a list of features, instead of stating the underlying goal. Challenge each one by asking "who would find this useful? Why is that important to them? How does it support their activities? How does it affect the goal?" This should elicit what the underlying goal actually is and help de-prioritise features that have little relevance to the goal.

Discovering Requirements and constraints: Working from goal to stakeholder activity. Formal format:

___

Identifying discrete valuable units of improvement: map from stakeholder activity to feature (decomposed into stories) and in parallel, to team actions (non-technical items).

Ask "what is the simplest thing that could possibly help the stakeholder to achieve their aim?" This may not require software. Alternatives include education, marketing, process changes… In some cases, simulating the existence of a new software system may help identify how it could support users.

Discover missing details, explore new opportunities and alternatives: given a focused goal, you can branch off the map at each subsidiary level:

- Who else?
- How else?
- What else?

Divergent / convergent thinking can be supported by testing these alternatives. Don't eliminate too early. Thinking jointly about off-the-wall ideas can generate new logical connections between ideas.

Effect maps force us to visualise our chains of inference. Explicit assumptions are open to questioning.

War Story

Gojko was working on a team developing a game for Facebook. The customer stated "I want Levels and Achievements, now!"

As this was difficult to accommodate in the existing architecture, the team challenged the requirement. Five "whys":

1. The Board has demanded it

2. Players reaching new levels and achievements will give them something to post about on their wall
3. It will advertise our game to all their friends
4. More players signing up to the game → more advertising revenue
5. Want 1 million new players in 6 months

The team therefore was able to effect-map from the goal of 1m players and discover that a more effective way to achieve that was viral marketing - giving players incentives to invite their friends and making it easier for new players to sign up. Invitations were encouraged by making the product more compelling.

Effect map supported by FreeMind with asterisks (one to four) denoting the importance of any given branch in the mind map. Leaves on the map were annotated with effort estimates to make it easy to prioritise among them.

Lesson learned: business people found prioritisation at level 3 (stakeholder activity) much easier than at level 4 (team actions and user stories). Metrics really helped too: the knowledge that £4 per player spent on advertising put a limit on the cost of any alternative approach – in this case, £4M to recruit 1M new players. A fraction of that amount could be spent on each of the alternative approaches to test their effectiveness.

Exercise 2: goal = increase proportion of Pay By Phone customers

Learnings:

- Goal needs to be quantified and timeboxed
- Frequently you think of the answer before you identify the question – there is an element of "post hoc" rationalisation, but mapping it out in this way shows which suggested actions are supported by preceding levels
- Best strategy might not be to improve the rudimentary pay-by-phone system but to replace it with something completely different (e.g. Oyster). This technique gives us a rough idea of costs and benefits to allow choice between alternatives.

Facilitation Tips

The power of effect maps is dependent on the means of their creation.

People:

- Prepare them well – it's hard to come into the exercise "cold"; don't waste their time
- Divide and Concur (or diverge and merge) – give each group the same information and instructions and then compare the results reached independently. This reduces the influence of the dominant person in the room

- Sensitivity – beware of insinuating that senior business people don't know the fundamentals of their own business. Effect Maps should only be pitched as a technique for visualising <u>our</u> assumptions
- Be aware that assumptions are volatile – unless they are recorded in some form, the logical connection between goal and team action can be lost and decisions become just "folklore"

Scope and Longevity:

- Scope: how much should we bite off in one go?
- Longevity: how long do we want to keep the results?
- Effect Maps are most effective in preventing bad decisions in the short to medium term. They can be applied in a timeframe from "the next release" up to a 5-year plan, but the sweet spot is towards the lower end of that scale
- Three critical phases where effect maps can be applied well:
    - High level stakeholder analysis
    - Challenging assumptions around stakeholder value of features
    - Rationalising into a clear vision or roadmap
- Don't try to address all three objectives in the same session
- User Story Hell can be addressed by annotating the items on the backlog to localise them on the effect map

Further Reading
- Effect Managing IT – Balic & Ottersten
- Gojko's White Paper
- Gojko's Handbook (in beta) see http://gojko.net/
- Marten Angner's web site http://www.angner.se/services/effect-mapping/
- SkillsMatter podcast under „Agile Testing" heading
- Presentation: http://tinyurl.com/SpaEffect