4. Stakeholders

10 September 2008

Bob Glushko

Plan for ISSD Lecture #4

Who are we designing for?
Defining "Stakeholder"
Classifying stakeholders
Stakeholders in the Sitrep project
Who are we Designing for?

What does each of these words imply or assume about the design focus, or the relationship between the makers of something and its users?

- User
- Operator
- the "Functional Beneficiary"
- Customer
- Patient
- Client
- Buyer / purchaser
- Payer
- Investor
- "Champion"

Design Questions and Stakeholders [1]

<table>
<thead>
<tr>
<th>Will the sponsor like it?</th>
<th>Sponsor and financier.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is it in his interest to invest in it?</td>
<td></td>
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<tr>
<td>Will it be put into effect?</td>
<td></td>
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<tr>
<td>Does it make the best use of available materials and components?</td>
<td>Suppliers.</td>
</tr>
<tr>
<td>Can it be made cheaply enough with available resources?</td>
<td>Producers.</td>
</tr>
<tr>
<td>Can it be distributed through available channels?</td>
<td>Distributors.</td>
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</table>
Design Questions and Stakeholders [2]

<table>
<thead>
<tr>
<th>Design Questions</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>What appearance, performance, reliability etc. is required?</td>
<td>Consumers and sales organizations.</td>
</tr>
<tr>
<td>To what extent will it be compatible with, or competitive with, other products?</td>
<td>Other sponsors.</td>
</tr>
<tr>
<td>To what extent will it restructure the existing situation to create new demands, opportunities and problems?</td>
<td>Large scale system operators.</td>
</tr>
<tr>
<td>To what extent are its effects, and side-effects, acceptable to all concerned?</td>
<td>Political institutions and pressure groups.</td>
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Generations of Computing Technology

[Diagram showing the generations of computing technology from vacuum tubes to embedded systems, spanning from 1955 to 2005.]
Technology Changes the Design Context

Technology Changes the "User Interface" Context

Shifting Focus of Interface Development
From "Operators" to "Users" to "Stakeholders"

The first "users" of computers were data entry and operations personnel, who functioned almost as peripheral devices when doing their jobs.

When computing technology became "personal" it also became discretionary, and it became more important to understand the goals and preferences of discretionary users.

But while understanding the intended "user" of a system or service is necessary, it isn't always sufficient.

There may be many different types of users, and many other groups of people who have a "stake" in the design and deployment of the product, system, or service.

Defining "Stakeholder"

"the people who affect the success of your (software) product, and are affected by it" (O-i SD, p. 11)

"all the claimants inside and outside the firm who have a vested interest in the problem and its solution" (Mason & Mitroff, 1981)

"any person or organization who can be positively or negatively impacted by, or cause an impact on the actions of a company" (Wikipedia)
John Mackey on Stakeholders (O-in SD, p 11)

"Sometimes what is in the best interest of one stakeholder may not be in the best interest of another stakeholder..."
"... as the CEO, I have to balance the various interests of the different constituents and stakeholders to create win, win, win scenarios...
"... and that can sometimes be very difficult to do."

Stakeholder Conflicts
Identifying the Stakeholders: Why

So you design and develop something that meets someone's requirements

So you can make explicit what would otherwise be hidden decisions about features, functions, and priorities

To improve traceability (where did this requirement come from?) and impact analysis (who will care or be affected if we do this?)

Improve the effectiveness of communication with and among the stakeholders
Identifying the Stakeholders: How

Who should do it?

Approach 1: Start from the "project sponsor," ask "who is a stakeholder" and follow the links with a "diminishing returns" rule

Approach 2: Find who can answer the "design questions"

Caveat 1: The "organization chart" can not be counted on as a guide to identifying stakeholders

Caveat 2: There will often be "default" stakeholders that are easily ignored

Stakeholder Characteristics

Relationship to the thing being designed

Relationship to other stakeholders

Priority of their point of view
Stakeholder Classifications

These characteristics are implicitly or explicitly represented in stakeholder classifications, frameworks, or taxonomies (and there are too many of them)

The classifications reflect the design domain and context:

- The O-i SD framework is that of a software vendor building a product or platform for another customer
- The Sutcliffe taxonomy describes only the stakeholders inside the firm using the system, and reflects the "org chart" hierarchy
- Alexander's "onion" classifies stakeholders from an "inside the firm" perspective but also includes external ones

The Outside-In Classification (O-i SD, p 24)
Principal Stakeholders

PRINCIPAL stakeholders are the business people who sponsor the acquisition and use of the thing being designed.

They focus on business value, not features or functions.

They can be external in a customer or client organization or, when the design is for internal use, in the same firm as the designers.

In this latter context the most important of the principal stakeholders is sometimes called the PRODUCT CHAMPION.

End-User Stakeholders

END-USERS are the focus of user-centered design methods, and their needs are important.

But they may be at odds with those of the principal stakeholders, depending on whether their use is:

- An essential use
- An optional or discretionary use
- Part of a job requirement
**Partner Stakeholders**

PARTNER stakeholders include people who support -- install, configure, customize, maintain -- the systems or end-users.

They might be in the same firm as the users.

Or they might be more distant members of the "ecosystem" in which the product or service is deployed.

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**Insider Stakeholders**

INSIDER stakeholders are people in the company that is designing and developing the product or service.

This category includes marketing, sales, finance, engineering, customer support, and other functions that "touch" the offering during its life cycle.
"Rings" or "annuli" around the "kit or product" that represent "distance" from it

Each ring contains a set of named slots or roles, each of which has a distinct relationship to the thing being developed

"Our System" ring is equivalent to the "End-user" category in the O-i SD stakeholder classification
Sutcliffe's Taxonomy of System Stakeholders

PRIMARY stakeholders will directly use or interact with the system

SECONDARY stakeholders will not directly use or interact with the system, but will consume its outputs and depend on its operation for their own work

TERTIARY stakeholders who don't use the system's outputs at all, but make use of mediated information for planning and strategic control of the business

"Single-line" and "Double-line" Stakeholders

Most stakeholders will be "double-line" - because they will be affected by the design, they will be able to suggest requirements or constraints on it

Single line stakeholders are affected by designs, but have no (effective) influence on them

Surrogate stakeholders often emerge as people who are supposedly representing the concerns of single-line stakeholders, but their use can be problematic
Negative Stakeholders

A stakeholder role is negative when it is opposed to the successful completion or operation of the thing being developed.

Employees can be negative stakeholders if they (incorrectly or correctly) perceive that the goal of a system is to eliminate, de-skill, or otherwise make their current jobs worse.

Negative stakeholders can sometimes have disproportionate influence if they use the press, politicians, the courts, or a sympathetic public to get more leverage.

Negative internal stakeholders in high-technology contexts can be especially detrimental or dangerous.

NIMBYs are a common type of negative stakeholder.

Negative Stakeholders at the Cal Stadium
S.F. officials locked out of computer network

Jaxon Van Derbeken, Chronicle Staff Writer

Tuesday, July 15, 2008

(07-14) 19:23 PDT SAN FRANCISCO -- A disgruntled city computer engineer has virtually commandeered San Francisco’s new multimillion-dollar computer network, altering it to deny access to top administrators even as he sits in jail on $5 million bail, authorities said Monday.

Terry Childs, a 43-year-old computer network administrator who lives in Pittsburg, has been charged with four counts of computer tampering and is scheduled to be arraigned today.

Prosecutors say Childs, who works in the Department of Technology at a base salary of just over $126,000, tampered with the city’s new FiberWAN (Wide Area Network), where records such as officials’ e-mails, city payroll files, confidential law enforcement documents and jail inmates’ bookings are stored.
OCHA Sitrep Project

SITuation REPort:

- Internal or public document used by agencies involved in emergency response
- About the situation on the ground
- Response efforts
- Usually a semi-structured Word document distributed via email

Cyclone Nargis
Myanmar
OCHA Situation Report No. 10
14 May 2008

This situation report is based on information received from the UN Resident Coordinator’s Office, Myanmar, UN agencies, UNDAC, regional humanitarian partners and media sources.

1. SITUATION IN MYANMAR

1. Cyclone Nargis struck Myanmar on 2 and 3 May 2008, making landfall in Ayeyawady Division and directly hitting the country’s largest city, Yangon. 40 townships in Yangon Division and 7 townships in Ayeyawady Division remain on the Government’s list of disaster areas.

2. Assessment teams have reported major damage in affected areas, particularly the low-lying delta region, where the cyclone’s impact was compounded by a storm surge. The official death toll now stands at 34,727, with 27,956 missing. Unofficial estimates are considerably higher. Based on the original Government figure of 975,898 persons affected three days after the disaster in the eight most seriously hit townships, the UN now estimates that between 1.6 and 2.5 million people are severely affected.

3. 52 agencies were undertaking assessments in 69 townships as of 13 May 2008. Priority townships for further assessments (where gaps in information have been identified) are Dinarp, Pyay, Taunggyi, Mawlamyine, Wakan, and the southern part of Bago. These same areas are also currently assessed as underserved by relief assistance.
The ISchool Team

Nick Rabinowitz, Megan Finn, John Ward, Elisa Oreglia

First trip to New York, UN OCHA headquarters, to understand what doesn’t work with Sitreps (March 2008)
Initial Questions

Who is impacted by sitreps?
Who writes them? Reads them? Uses them?
What is the hierarchy, as far as users are concerned?

OCHA Sitrep Stakeholders [1]

Approach 1: Start from the "project sponsor," ask "who is a stakeholder" and follow the links with a "diminishing returns" rule

Answer: “Sitreps are a fundamentally confused document… whose audience is everybody.”

- Public at large
- Governments (donor and local governments)
- UN and NGOs
- Civil Society
- Media
- OCHA staff
Approach 2: Find who can answer the "design questions"

Caveat 1: The "organization chart" can not be counted on as a guide to identifying stakeholders

Caveat 2: There will often be "default" stakeholders that are easily ignored

First Round of Interviews (NY, March 2008)

Identified 3 key stakeholders:

- 1. OCHA operational staff (desk officers in NY and Geneva, field officers)
- 2. OCHA senior managers at HQ
- 3. Sitrep recipients
Second Round of Interviews (Geneva and Nairobi, August)

OCHA operational staff at field level
- Sitrep writers
- Information managers
- Head of Office

Sitrep recipients
- Donors at field level and HQ
- Other UN Agencies
- NGOs
- (Other Civil Society Organizations)
- (Local government)
- (Media)

Sitrep Stakeholder Map [1]
## Sitrep Stakeholder Map [2]

### Sutcliffe Taxonomy of System Stakeholders

**PRIMARY STAKEHOLDERS**
(Use or interact directly with the system)
- **Within OCHA**
  - Field Officers
  - (Desk Officers)
- **Outside OCHA**
  - (Other UN Organizations)
  - (NGOs)

**SECONDARY STAKEHOLDERS**
(Use the system directly, but consume its outputs and depend on it for their own work)
- **Within OCHA**
  - Desk Officers
  - RelateWeb
  - Donors in the Field
  - (Donors HQ)
- **Outside OCHA**
  - Other UN Organizations
  - NGOs
  - Other Civil Society Organizations
  - Local Government

**TERTIARY STAKEHOLDERS**
(Use use of mediated info for planning and strategic control of the business)
- **Within OCHA**
  - Senior Management at HQ
- **Outside OCHA**
  - Donors HQ, e.g., big donors
  - Local Government
  - Other UN Organizations’ HQ

## Sitrep Stakeholder Priorities

<table>
<thead>
<tr>
<th>PRIORITY OF STAKEHOLDERS according to OCHA Senior Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Donors HQ</td>
</tr>
<tr>
<td>2 OCHA HQ/Senior Management</td>
</tr>
<tr>
<td>3 Donors in the Field</td>
</tr>
<tr>
<td>4 OCHA Desk and Field Officers</td>
</tr>
<tr>
<td>5 Other UN organizations</td>
</tr>
<tr>
<td>6 Everyone else, including NGOs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRIORITY OF STAKEHOLDERS according to us</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 OCHA Desk and Field Officers</td>
</tr>
<tr>
<td>2 Donors (still haven’t decided if HQ or field donors have priority)</td>
</tr>
<tr>
<td>3 Other UN Organizations AND NGOs (treated as equals)</td>
</tr>
<tr>
<td>4 OCHA HQ/Senior Management</td>
</tr>
</tbody>
</table>
Readings for 15 September

Carl Kessler & John Sweitzer, Chapter 3 – Understanding organizational context, Outside-in Software Development


Colin Potts, “Invented requirements and imagined customers: Requirements engineering for off-the-shelf software,” Second IEEE International Symposium on Requirements Engineering (RE'95)