Community Insights
Helping community leaders enhance the value of enterprise online communities

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Valuable online communities

Online communities:

- trusted network
- interact repeatedly
- shared interest, practice, or collaborative effort

Increasingly prevalent in enterprises.
Enterprise online community leaders

- **Goal?** Foster healthy, valuable community.
- **Why?** Critical to community success. Key emerging role.
- **What do they do?**
  - Encourage participation.
  - Contribute, read, organize, curate content.
  - Maintain infrastructure.
  - Organize events.
  - Help members.
  - Report to sponsors.

Problem

Many communities fail.

- Large gap between community leadership theory and day-to-day practice.
- Dynamic analysis tools are needed to assess community progress on goals and guide interventions.

**Limited research on tools to support community leaders.**
Community Insights research overview

**Evidence-based design** of Community Insights (CI), a tool providing actionable, contextualized analytics to help **community leaders** foster successful online communities.

1. Research context.
2. Formative requirements interviews.
3. Design of CI.
4. Field study.
5. Results.
IBM’s online community tool: Connections Communities

Welcome!! HorizonWatch is all about emerging and future trends, technologies and business issues.

- **Overview:** HorizonWatch Community Overview
- **Demographics:** This is a very diverse community. The members in this community come from 191 divisions and 1703 departments. Members are located in 51 countries and 18 timezones across 357 work sites. Members come from many, many different functions/roles. 598 members of this community are managers.
- **Database:** Access 12 years of community reports at HorizonWatch on Bluemine

Let's collaborate together and be better prepared for the potential futures that may happen.

Tags: emerging-technologies, emerging-technology, emergingtrends, foresight, future, futures, futurist, horizonwatch, technology-trends, trends

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**Forums**

- **IBM's Watson: What do you think are the best 1) Near Term and 2) Longer Term applications or use cases for IBM Watson?**
  
  Latest post by [Username] // Mar 20 // 59 replies

- **What will be the top Technology Trends for 2013?**
  

- **What will be the top Business / Industry Trends for 2013?**
  

- **What will be the top cross-industry/environmental trends for 2013?**
  

- **Technologies in the Year 2040: What Technologies are just emerging here in 2012 that will become very important to IBM over the next 25-30 years?**
  
  Latest post by [Username] // Sep 20, 2012 // 92 replies

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**Blog**

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**Members**

- [View All (2221 people)]
Connections Communities usage overview in IBM
(Data snapshot on Tuesday, 4/23/13)

# communities total
- # communities created, last 24 hours: 399

# distinct owners
- members: 580,336
- users logged-in, last 7 days: 102,321

- # communities total: 166,683

Tara Matthews, IBM Research - Almaden
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Study of community leaders’ needs

Objective: Gather qualitative feedback from community leaders about
- How they enacted their role.
- Challenges faced and needs.

Method
- Interviewed 12 community leaders
  - led a mixture of community types
  - mostly experienced, some novices
  - about half with community leadership as a job responsibility
- Semi-structured, 1-hour, via phone, recorded, transcribed, and coded.
Community leader needs: results can be boiled down to...

**Information:** How *healthy* and *successful* is my community?

**Action:** How can I take action to enhance its *health* and *success*?
Results: information

**Participation**
- Contribution, consumption volume?
- Other activities, interactions?

**People**
- Who are members?
- Do the form sub-groups?
- Key people: top contributors, experts, thought leaders, etc.?

**Content**
- Most valuable content?
- Types of value derived from content?
- Match member needs?

**Sociability**
- Social connections fostered?
- Types of value derived from connections?
- Dialog active and useful?
- Questions asked and answered?

**Leadership**
- Leaders activities effective?
- Compare to other successful communities?
- How to involve sponsors?

**Comparable Communities**
- Provide context for understanding metrics.
- Combined reporting requirements.
- New community needed?
- Join forces on initiatives, events.
Results: action

Leaders wanted information that informed actions to improve their community.

- People, sub-groups → engagement
- High value content → duplicate
- Popular topics → organize the site
- Trends, surprises → remediation
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Community Insights information selection

<table>
<thead>
<tr>
<th>Participation</th>
<th>People</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Question Mark" /></td>
<td><img src="image2.png" alt="Question Mark" /></td>
<td><img src="image3.png" alt="Question Mark" /></td>
</tr>
</tbody>
</table>

...many potentially useful metrics proposed...
Community Insights information selection

<table>
<thead>
<tr>
<th>Discussed in Communities Literature</th>
<th>Participation</th>
<th>People</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>By many</td>
<td>• Overall activity • Posts • Views • Contributors</td>
<td>• Membership change • Top contributors</td>
<td></td>
</tr>
<tr>
<td>By a few</td>
<td></td>
<td></td>
<td>• Popular topics • Value of posts • Most valuable posts</td>
</tr>
<tr>
<td>None</td>
<td></td>
<td>• Members’ geo locations • Members’ business divisions • Managers / non-managers</td>
<td></td>
</tr>
</tbody>
</table>
COMMUNITY INSIGHTS

1. Assess community health.
2. Identify actions to improve.
Participation

The Participation page helps you learn about the activities people are doing in your community and how they are using the tools. More...

Suggested interpretation & use: Intervene if views drop for a couple of weeks in a row. Interpret drops in views as a potential indicator of a drop in the value of the community’s content to members. Develop a program to ensure that new content is regularly being added to the community (tips on how to encourage participation). Launch a campaign advertising popular new posts to draw members back, for example, via a regular newsletter.

Suggested interpretation & use: Maintain "fresh" content. Use posts by application to see if new content is being posted to the vital parts of your community each month. This will ensure that members have "fresh" content to keep them coming back to the community.

Activity by Application

<table>
<thead>
<tr>
<th>Application</th>
<th>#posts</th>
<th>#posts/member</th>
<th>#views</th>
<th>#versions</th>
<th>#recomm.</th>
<th>#comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiki</td>
<td>9</td>
<td>0.00</td>
<td>2786</td>
<td>61</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Blog</td>
<td>178</td>
<td>0.09</td>
<td>9826</td>
<td>0</td>
<td>127</td>
<td>204</td>
</tr>
<tr>
<td>BlogCmt</td>
<td>204</td>
<td>0.11</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Idea</td>
<td>1</td>
<td>0.00</td>
<td>46</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>File</td>
<td>0</td>
<td>0.01</td>
<td>2246</td>
<td>0</td>
<td>23</td>
<td>66</td>
</tr>
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Community Insights field study


- Log data (page views & clicks per user).
- 470 communities.
- 1093 users (at least 1 page view).

Interviews conducted throughout deployment

- 17 active users (high page views & days accessed) representing diverse communities.
- Semi-structured, 1-hour, via phone, detailed notes taken.
- We asked about
  - *Health*: How did leaders assess community health using CI? Which metrics were most useful?
  - *Action*: How did leaders analyze and act with CI? Which metrics were most useful?
  - *Understanding*: What issues did leaders experience interpreting data CI presented, if any?
Community leaders found CI very useful

“This tool is exactly what I wanted. It’s like finding gold.”

“Thank you for your work with Community Insights. These metrics have been invaluable as we work to improve [our community] in Connections.”
## Rethink the most useful community health metrics

<table>
<thead>
<tr>
<th>category</th>
<th>metric</th>
<th># times examined</th>
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<tbody>
<tr>
<td>By many people</td>
<td>participation Views</td>
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<td></td>
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<td>participation Contributors</td>
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<td>people Top contributors</td>
<td>70</td>
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<td>39</td>
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<td>content Value of posts</td>
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<tr>
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<td>content Most valuable posts</td>
<td>42</td>
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<tr>
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<td>people Members’ geo locations</td>
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<tr>
<td></td>
<td>people Members’ business div.</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td>people Managers / non-mgrs.</td>
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**Results**

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(1) *Participation* metrics, especially *views.*
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“[My managers] want to know about growth in membership… Just because we’re the 64th largest community, does that really mean anything? To the extent… you could tie [stats] to a business goal… these are the kind of stats you should collect.” –P2

(1) Participation metrics, especially views.
## Rethink the most useful community health metrics

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"Very cool... This helps me understand if the content I'm putting out there... *is providing value to the community* – I can see that it is!" –B1

(2) *Value* of content produced. (Bigger may not mean better.)
Actionable analytics are needed

Leaders wanted information that helped them act to improve their community.
Designing actionable analytics

(1) Identify & engage with sub-groups or members.

What worked

- **People metrics**: geographic location, top contributors.

  “I’ve been particularly interested in the ‘people’ area and ‘top contributors.’ We’re trying to create a council of [volunteers] to make sure content is updated.” –M1

Future work

- Analytics to identify “experts,” “influencers,” other key people.
Designing actionable analytics

(2) Identify problems to remediate.

What worked

- Long-term trends.
- “Healthy” thresholds.

“I look at the metrics... if there’s lots of passive file downloading, I will recommend... weekly community discussions to facilitate active participation.” –A1

Future work

- Automatically identify problems.
- Assess progress on goals.
Designing actionable analytics

(3) Identify successful examples to emulate.

What worked

- **Most popular topics and valuable posts.**
  
  “[The chart] tells me that in certain months, it was a forum reply that really caught on. So then I can go back into my community... and look at it.” –K1

Future work

- Automatically identify new types of “successful” content or actions.
Designing actionable analytics

(4) Evaluate actions / events to aid future planning.

What worked

- Event-related views & posts.

“We want to see if writing blogs has an impact in the community. So we want to be able to select a particular day/time when a blog was posted and see what the metrics look like before and after.”

–M1

Future work

- Automatic event reports.
Interpreting raw data is a challenge

Interpreting data was a major challenge.

“I can see we have 431 views this month. Is that good or bad?”

“Now that I know the number of posts, what do I do with it?”

Need for contextualized analytics: data presentations that provide context for interpretability.
Contextualized analytics: relating data to...

1. Meaningful general baselines
2. Critical events
3. Leader interventions
4. ‘Normal’ vs. ‘unusual’
5. Community goals
6. Related communities
Contextualized analytics: relating data to...

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Event
Contextualized analytics: relating data to...

1. Meaningful general baselines

2. Critical events

3. Leader interventions

4. ‘Normal’ vs. ‘unusual’

5. **Community goals**

6. **Related communities**

“**Our goals are to drive traffic to build skills, share knowledge… Are there key metrics that help us indicate these goals?**” – R1

“**How healthy is my group compared to the average characteristics of the same category of group?**” – D1

Results

“Our goals are to drive traffic to build skills, share knowledge… Are there key metrics that help us indicate these goals?” – R1

“How healthy is my group compared to the average characteristics of the same category of group?” – D1
Summary of contributions

**Evidence-based design** of Community Insights (CI), a tool providing actionable, contextualized analytics to help **community leaders** foster successful online communities.

New empirical findings:
- Evaluated **metrics** using leader feedback to determine their utility.
- Showed that leaders want data **to act** and present the actions they want the system to inform.
- Showed that raw data is too difficult to **interpret** and contextualized analytics are needed.

System contributions
- **Actionable** analytics.
- **Contextualized** analytics.
Thank you!

For more information contact tlmatthe@us.ibm.com