# Usage of Themis and technical debt - Managers profile

We're Matthieu Foucault, Margaret-Anne Storey, and Xavier Blanc, Computer Science researchers from the University of Victoria and the University of Bordeaux. Our team is investigating how the Themis tool's game-like features help manage technical debt. We'd be grateful if you could help us understand this further by completing the survey below. It should take approximately 20 minutes of your time.

We will openly publish the results so everyone can benefit from them, but will anonymize everything before doing so. Your responses will be handled confidentially.

Please note that you are not obligated to participate in this survey. If at some point during the survey you want to stop, you are free to do so without any negative consequences---the survey data is not saved until you click the Submit button.

Thanks for participating! Please read the following to understand the nature of this research and how we'll manage your data.

Participant Selection
You are being asked to participate in this study because you are a development manager and an active user of Themis.

Risks
There are no known or anticipated risks to you by participating in this research.

Benefits
Your participation in this research will help us understand the effect of gamification on software development processes.

Voluntary Participation
Your participation in this research is completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study (do not click the Submit button), your data will not be submitted, saved or used in any form. Click the Submit button only if you agree to voluntarily participate.

Anonymity
The survey is completely anonymous and we do not require your email address. If you choose to provide your email address, we will use it to contact you for a potential interview and send you the results of our study. Your email address will be removed from the survey data and replaced with anonymous identifiers before the results of this study are published.

Confidentiality
The survey data and your identity will be protected by restricted and secure computers located in our research lab at the University of Victoria. Only the research investigators will be able to access the data once it is downloaded from the server that hosts the survey.

Please be advised that this survey may use tools that store data in the U.S. As such, there is a possibility that information about you that is gathered for this research study may be accessed without your knowledge or consent by the U.S. government in compliance with the U.S. Patriot Act.

Dissemination of Results
It is anticipated that the results of this study will be shared with others in the following ways: theses, dissertations, published articles or books, presentations at scholarly meetings, on the Internet, and directly to the participants involved (if requested to be notified of results).

Disposal of Data
Data collected will be disposed of 5 years after the beginning of the study. All survey data collected and backups will be electronically deleted.

Contacts

If you have any questions or concerns about this research, please feel free to contact any of the members of our research team: Xavier Blanc (xblanc@labri.fr), Matthieu Foucault (mfoucault@uvic.ca) and Margaret-Anne Storey (mstorey@uvic.ca). In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (+1 250-472-4545 or ethics@uvic.ca).

By completing and submitting the survey, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.
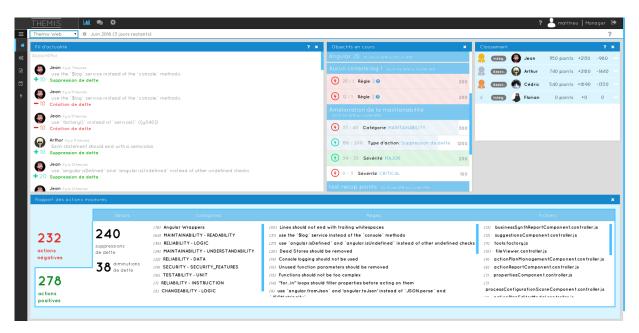
*Required

# Opening questions

1. **Why do you use Themis?** *

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2. **How many hours per week on average did you spend using Themis?** *

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# Themis usage: Home dashboard

The Home dashboard is the first screen shown when logging into Themis. It uses widgets to display the following information: news feed, leaderboard, current goals, and main actions report.
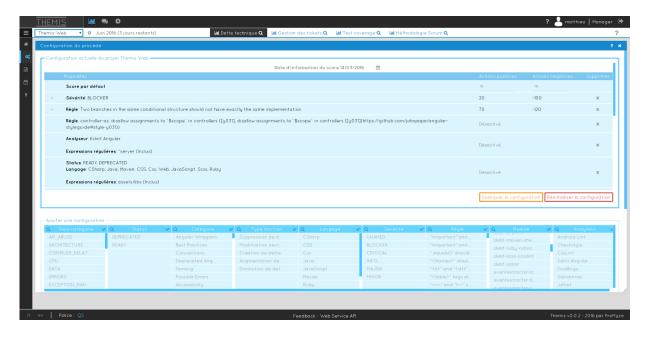
3. **What information do you find useful in the Home dashboard? Please elaborate why.** *

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4. **What steps do you take based on information from the Home dashboard?** *

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# Configurations

The configuration panel allows you to edit the properties of the process managed by Themis (in our case technical debt). A property of the technical debt process is defined by a set of linter rules and a file filter, and a given amount of positive and negative points will be assigned to the property. This amount will be 0 if the property is disabled, i.e. its linter rules are ignored.

## Configuration screen



5. **How many times per week on average did you configure process properties for your project?** *

6. **How important to you is the ability to configure process properties in Themis? ***
   *Mark only one oval.*

   |                      | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                      |
   |----------------------|---|---|---|---|---|---|---|----------------------|
   | Not important at all | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | ◯ | Absolutely essential |

7. **Explain why. ***

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8. **Describe how you decide which properties are relevant for the measure of technical debt in your project. ***

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9. **When you changed the configuration of the technical debt properties, why did you decide to change it? ***

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10. **For one of the properties you configured, please explain how you decided how many positive or negative points to attribute to the property. ***

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    _____

## Actions dashboard

The Actions dashboard shows (for either the overall project or a single developer) the list of actions performed, and contains several charts showing the distribution of actions across hours, days, categories
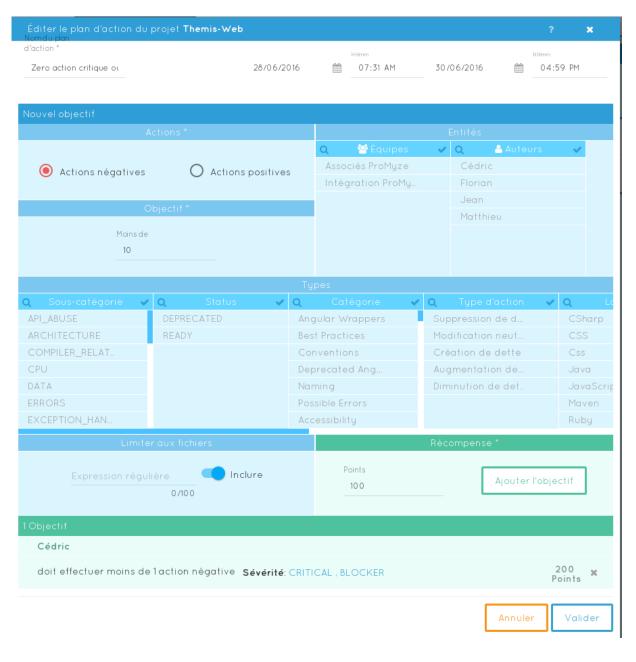
of rules, teams etc.



**11. What information do you find useful in the Actions dashboard? ***

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**12. How do you use the information in the action dashboard? ***

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**13. Are you making managerial decisions based on the overall project's Action dashboard? Please tell us more about those decisions and the reasons why. ***

14. **Do you monitor individual developer's actions using the actions dashboard? If yes, please explain why. ***

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15. **Do you make managerial decisions based on an individual developer's Action dashboard? Please tell us more about those decisions and the reasons why. ***

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16. **The Action dashboard displays action using either the number of points or the number of actions. Which one do you use the most? ***

*Mark only one oval.*

( ) Only the number of actions

( ) Mainly the number of actions

( ) Both

( ) Mainly the number of points

( ) Only the number of points

17. **Explain why. ***

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# Actions plans

Creating an action plan allows you to set new goals for the team or specific developers and include a reward for performing more than a given number of positive actions or less than a given number of negative actions, over a set period of time. An action plan contains one or several goals. A goal can target a specific rule, a filtered set of rules, or all rules.

**Éditer le plan d'action du projet Themis-Web**

Nom du plan d'action *

| Zero action critique ou | 28/06/2016 | HHmm 07:31 AM | 30/06/2016 | HHmm 04:59 PM |

**Nouvel objectif**

**Actions ***

( ) Actions négatives    ( ) Actions positives

**Entités**

Équipes
- Associés ProMyze
- Intégration ProMy..

Auteurs
- Cédric
- Florian
- Jean
- Matthieu

**Objectif ***

Moins de
10

**Types**

| Sous-catégorie | Status | Catégorie | Type d'action | |
|---|---|---|---|---|
| API_ABUSE | DEPRECATED | Angular Wrappers | Suppression de d... | CSharp |
| ARCHITECTURE | READY | Best Practices | Modification neut... | CSS |
| COMPILER_RELAT.. | | Conventions | Création de dette | Css |
| CPU | | Deprecated Ang... | Augmentation de... | Java |
| DATA | | Naming | Diminution de det... | JavaScrip |
| ERRORS | | Possible Errors | | Maven |
| EXCEPTION_HAN... | | Accessibility | | Ruby |

**Limiter aux fichiers**

Expression régulière      (○) Inclure
0/100

**Récompense ***

Points
100

[ Ajouter l'objectif ]

**1 Objectif**

**Cédric**

doit effectuer moins de 1 action négative  **Sévérité**: CRITICAL , BLOCKER    200 Points ✕

[ Annuler ]  [ Valider ]

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18. **How important are action plans for reducing technical debt? ***
*Mark only one oval.*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---|---|---|---|---|---|---|---|---|
| No important at all | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | Absolutely Essential |

19. **Explain why.**

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20. **Did you create action plans? Please give an example of an action plan you created and why you created it.** *

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21. **When creating a new goal in an action plan, how do you choose between rewarding positive actions or a lack of negative actions? (do not answer this question if you did not create any action plan)**

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22. **When creating a new goal in an action plan, how do you choose whether this goal should be assigned to a team or a single developer? (do not answer this question if you did not create any action plan)**

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# Use of Themis by developers

23. **What instructions did you give to the developers of your team on how to use Themis?** *

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24. **How did your developers react to the presence of a leaderboard in Themis?** *

25. **Do you think the participation of developers to the leaderboard should be voluntary? Please explain why or why not.** *

26. **Did you receive comments (positive or negative) from your developers regarding Themis' usage? If yes which ones?** *

## Closing questions

27. **Do you believe Themis has had an impact on technical debt? And if so, how has it had an impact (positive or negative)?** *

28. **What are the main challenges you experience using Themis?** *

29. **Before using Themis, how did you manage your project's technical debt?** *

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30. **Did the introduction of Themis affect other tasks in your daily work? If so, how?** *

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31. **Describe any changes you would like to see made to the tool.** *

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32. **How old are you?** *
*Mark only one oval.*

◯ 18-24

◯ 25-34

◯ 35-44

◯ 44-54

◯ 55-64

◯ 65 or more

33. **What is your gender** *
*Mark only one oval.*

◯ Male

◯ Female

◯ Other:

34. **For how long have you been working on the project that uses Themis?** *

*Mark only one oval.*

( ) Less than six months

( ) Between six months and one year

( ) Between one and two years

( ) Between two and four years

( ) More than four years

# Optional Questions

35. **If you have any additional comments, questions, or concerns that you would like to share with us, please add them below.**

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36. **Are you willing to participate in an eventual follow-up interview?**

*Mark only one oval.*

( ) Yes

( ) No

37. **Are you willing to answer follow-up questions via email?**

*Mark only one oval.*

( ) Yes

( ) No

38. **Would you like to be informed about the outcome of this study and any potential publications?**

*Mark only one oval.*

( ) Yes

( ) No

39. **If you answered yes to one of the previous three questions, please leave a contact email address.**

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Thanks for making it all the way down here, you only have to click on the "Submit" button now.