

Assessment of Human DevOps

Before beginning the evaluation, start an online stopwatch to measure the time (in seconds) it takes you to understand how HumanDevOps works. Start the stopwatch NOW, and continue reading.

You are part of a software development company named *FinTech*. The company is currently expanding and has initiated a modernization of its software architecture by transitioning to microservices. The team involved in this transformation consists of nine software developers, three DevOps engineers, and you have been hired as the team leader.

The company utilizes a tool called *Human DevOps* to manage the human factors within the team. The development team is applying the Agile SCRUM methodology to carry out the project. The project has been divided into five consecutive sprints, each marked by a deployment and lasting two weeks.

To monitor the status of the team's human factors, all members respond to daily surveys distributed via the Human DevOps Slack application, as illustrated in Figure 1. These surveys focus on human aspects to capture the socio-technical dynamics that influence team performance.

Human DevOps APP 20:51

Do you feel that you own the product that you are developing? Do you feel responsible for anything that might happen to it?

Not at all A little Somewhat Mostly Completely

Do you deal with a heavy workload?

Never Rarely Sometimes Frequently Always

Has the team's customer underestimated tasks, overloaded the team or delayed the planning?

Never Rarely Sometimes Frequently Always

Have you been always treated fairly, given clear goals, and trusted by your team's supervisors?

Never Rarely Sometimes Frequently Always

Do you feel committed to your job?

Not at all A little Somewhat Mostly Completely

Could you accept or reject the methodology used by your team when it was introduced?

Not at all A little Somewhat Mostly Completely

Figure 1

The Human DevOps backend processes survey responses, identifying recurring patterns of low confidence in technical tasks. DevOps adoption levels are reflected

through quantitative percentage values for each human factor, which are internally processed and updated.

As the team leader, your responsibility is to analyze the results and make informed decisions supported by Human DevOps. This tool provides interactive network diagrams, color-coded as illustrated in Figure 2. Each human factor in the model is represented as a node, and lines connect related human factors based on the dependency relationships defined in the model. The quantitative value of each human factor is encoded using the visual channel of brightness; additionally, the color channel is used to distinguish between high values (positive connotation), low values (negative connotation), and indeterminate values. Specifically, dark green is assigned when the human factor value is 100%, dark red when it is 0%, and a range of intermediate colors for values between these extremes. Shades of gray represent human factors for which insufficient responses were collected.

Furthermore, to enhance user interaction and facilitate the interpretation and exploration of complex relationships in densely populated areas of the diagram, the interface allows manual repositioning of nodes via drag-and-drop. The system also supports interaction through cursor hover or clicking on individual nodes, which triggers a pop-up window displaying detailed information, including the name of the corresponding human factor and its associated score. In this section of the application, only average values are displayed, thereby preserving the anonymity of individual responses.

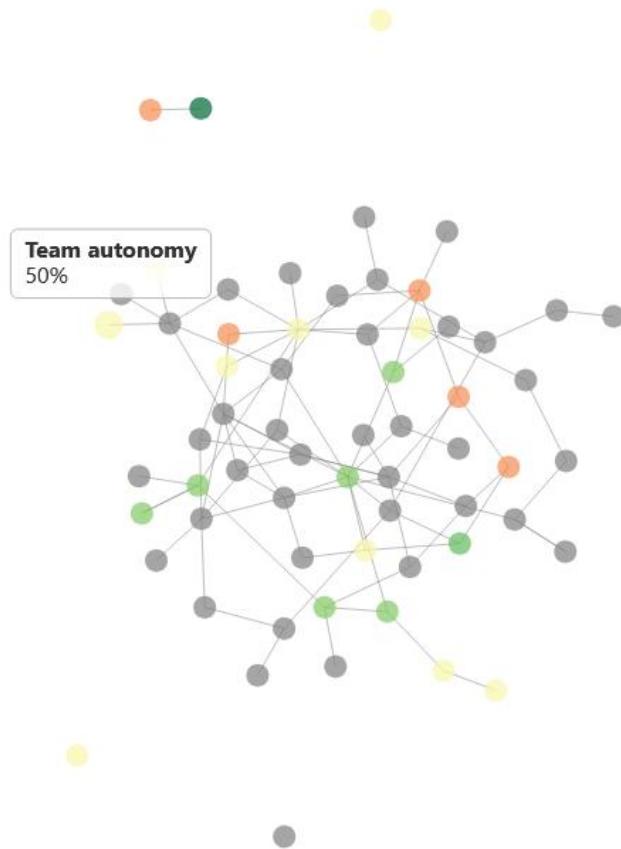


Figure 2

Additionally, Human DevOps includes a recommendation engine that generates automated suggestions, as illustrated in Figure 3. These suggestions consist of

prioritized management actions, each associated with a recommendation value (ranging from 0% to 100%), tailored to effectively address the issues identified in the human factors.

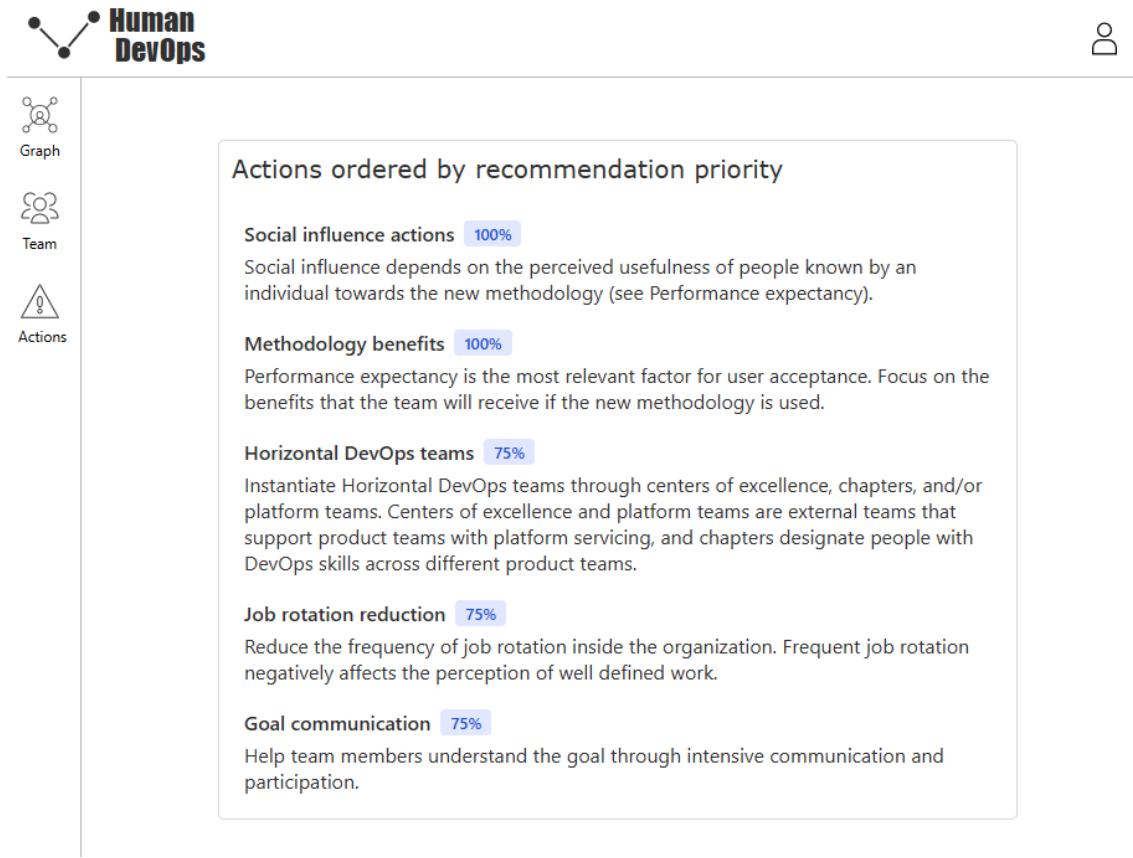


Figure 3

To better understand the application, you may watch the demonstration video showcasing the use of Human DevOps (<https://youtu.be/YyTtp7N2h1A>). The first part of the video presents a guide on how the Slack application collects responses, followed by an explanation of how the backend processes the data, and finally how team leaders can analyze the results using the frontend dashboard (including interaction diagrams and a list of actions ordered by recommendation priority).

At this point, stop the stopwatch and record the time you have spent reaching this stage (including the video viewing).

Let us return to your role as the DevOps team leader. After completing the first sprint, Human DevOps has gathered sufficient data, collected through Slack surveys answered by team members, for you, as the team leader, to analyze the socio-technical situation.

Exercise 1. Based on the scenario presented, interact with the application to determine:

- **Task 1:** Which actions have a recommendation priority of 100%?
- **Task 2:** Which are the three human factors with the most negative scores within the development team?

Use the following instance of Human DevOps to identify the actions with a 100% priority and the three human factors with the lowest scores. Measure the time taken for each of the two tasks from the moment you access the application.

An instance of the application is available at: <https://giis.inf.um.es/humanDevops/>

You may access it using the following credentials:

- **Username:** investigaciongiis@gmail.com
- **Password:** 9NbZLKiemG1AWjkNbmA

Then, proceed to answer the questions in the following questionnaire:
<https://arsyc.com/app/accessTest?code=MMnTf>

Note: Regarding the questionnaire item “How many times did you need help...?”, please indicate whether it was necessary to seek additional support to complete the task, or whether you were able to complete it solely using the provided documentation and demonstration video.