Survey - The attributes of great software engineering managers

Your answers help us.

Thank you for agreeing to participate in this survey.

Microsoft Research is interested in uncovering the attributes of great software engineering managers. Our aim is to improve how managers attract, retain and grow talent in their engineering teams. Responses to this survey are private and confidential. Please click here to review the privacy statement. The survey takes about 10 minutes to complete.

This survey is anonymous - no personal information will be collected. Aggregated information may be shared with research collaborators outside of Microsoft and used in publications. We selected you as part of a sample of Microsoft employees based on your job role. If you have any questions about this research project, please contact t-eikall@microsoft.com

After completing the survey, you can enter a raffle for one of two \$50 Amazon gift cards (official rules of the sweepstakes). Instructions for entering the raffle will be provided once you submit your response.

Thank you, Eirini Kalliamvakou (T-EIKALL) and Christian Bird (CBIRD)

Demographic information

You are an Engineering Lead

1)	Which one of the following describes you best? (required)*
0	You are an Individual Contributor

You are an Engineering Manager
Other - Write in:
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Individual Contributor")
2) What role do you directly report to?
C Engineering Lead
© Engineering Manager
Other:
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Lead","You are an Engineering Manager","Other - Write in")
3) What roles report to you? (select all that apply)
☐ Individual Contributors
Engineering Leads
Engineering Managers
Validation: Must be numeric
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Lead","You are an Engineering Manager","Other - Write in")
4) How many people directly report to you (non-vendors)?

Validation: Must be numeric
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Manager","Other - Write in")
5) How many people in total report to you, directly and indirectly?
Validation: Must be numeric
Logic: Hidden unless: (Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Individual Contributor") AND Question "What role do you directly report to?" #2 is one of the following answers ("Engineering Lead"))
6) How many people report to your Engineering Lead?
Validation: Must be numeric
Logic: Hidden unless: (Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Individual Contributor") AND Question "What role do you directly report to?" #2 is one of the following answers ("Engineering Lead"))
7) How many people in total report to your skip level manager, directly and indirectly?
If you don't know exactly, please give a rough estimate.

Validation: Must be numeric
Logic: Hidden by default
How many people report directly to your skip level manager?
If you don't know exactly, please provide a rough estimate.
Validation: Must be numeric
Logic: Hidden unless: ((Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Individual Contributor") AND Question "What role do you directly report to?" #2 is one of the following answers ("Engineering Manager")) OR Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Lead"))
8) How many people in total report to your Engineering Manager, directly and indirectly?
If you don't know exactly, please provide a rough estimate.
Validation: Must be numeric
Logic: Hidden by default
How many people report to your Engineering Manager directly?
If you don't know exactly, please provide a rough estimate.

Validation: Must be numeric
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Lead")
9) How many years in total have you been an Engineering Lead?
Validation: Must be numeric
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Engineering Manager")
10) How many years in total have you been an Engineering Manager?
Validation: Must be numeric
Logic: Hidden unless: Question "Which one of the following describes you best? (required)" #1 is one of the following answers ("You are an Individual Contributor")
11) How many years in total have you been a professional software engineer?
Validation: Must be numeric
12) How many years have you worked at Microsoft? (required)*

13) In what location do you work? (required)*
North America: USA - WA (Puget Sound regions: Redmond, Bellevue, Seattle, Sammamish, etc.)
North America: USA - Silicon Valley, CA
North America: USA - Other
North America: Canada, Mexico
Central America and South America
^C Europe
C Asia: China
C Asia: India
Asia: Middle East
C Asia: Other
Australia, New Zealand, Oceania
^C Africa
Other:
Validation: Must be numeric
14) How old are you? (enter in years)

^O Male												
Other - Write i	n:											
O I prefer not to s	say											
The following questions ask specifically about the role of the Engineering Manager.												
16) Below are 15 attributes that interviews with developers and managers indicated make great engineering managers but, of course, opinions vary. What do you think, based on your experience? Under each attribute you can find examples of the engineering manager demonstrating that attribute. Please rate how important each attribute is for distinguishing a great engineering manager												
from a good one, i A great engineerin	0 0		ritical	to "n	ot imp	ortant	.··•					
	Critic al									Not import ant		
mediates inter-team interaction Acting as a buffer with other teams/disciplines/man agers, negotiating what her team can	0	0	0	0	c	0	0	c	С	0		

15) What is your gender identity? (required)*

• Female

provide when, and mediating her own team's requests to other teams.

grows talent Providing opportunities for challenging work, suggesting training for the engineer to gain industry relevant skills, and providing actionable feedback to improve engineer performance.	0	0	0	C	0	0	C	C	0	0
is available Signalling themselves as approachable, and devoting time to the engineer when needed.	0	0	C	C	0	C	C	c	0	0
guides the team Coaching engineers on quality aspects (e.g. scalability), providing guidance through appropriate questions to engineers struggling with tasks, and helping the engineer build judgement.	0	C	0	C	0	C	C	C	0	0
protects developer flow Shielding the engineer from randomization, removing distractions and blockers, and helping to resolve issues or conflicts.	0	C	C	C	C	C	C	C	0	0
inspires the team Viewed as a leader, responding to situations individually rather than having general approaches, and demonstrating passion about their work, the team, and the company.	0	0	c	0	C	0	0	0	0	0
supports experimentati on	0	0	0	0	0	0	0	0	0	O

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Encouraging the engineer to try out new things, and signalling a safe environment for unsuccessful attempts.										
drives alignment Sharing information about higher level context, explaining the business intent for the product/service, creating a mission with input from the team, and setting clear goals for the trajectory.	C	C	C	C	C	C	C	C	C	C
enables autonomy Providing freedom on how engineers do their work, showing trust and support for their decisions, and helping engineers be independently responsible.	C	C	C	C	C	C	C	C	0	C
cultivates fairness Showing appreciation for the engineer's contributions, holding themselves accountable for the team's progress, and recognizing value publicly while correcting the engineer privately.	0	C	0	0	0	C	C	C	0	0
builds a relationship with team members Taking an interest in the employees' life outside work, discussing their general interests, and caring about them as a person.	0	C	0	0	0	C	C	0	0	C

maintains a positive working environment Providing flexibility to balance work and personal life, energizing the team through organizing events, celebrating team successes, and ensuring good morale.	0	C	С	С	С	C	C	C	0	C
recognizes individuality Understanding each engineer's strengths and weaknesses and finding fitting tasks for them, valuing diverse perspectives in the team, and fine tuning the definition of success to each individual's talents and interests.	C	C	C	C	C	C	C	C	C	C
builds team culture Demonstrating the rules, norms, and habits of the team, creating "what this team believes in" with input from members, and facilitating an environment of shared success and responsibility.	0	C	0	C	0	0	C	C	0	C
is technical Being knowledgeable about the system and technologies the engineer is working with, understanding the complexity or problems and solutions, and having input for design dilemmas.	0	0	c	C	c	0	0	0	0	0

17) If you think there are attributes of great engineering managers which we missed above, please enter them below.
▼ • • • • • • • • • • • • • • • • • • •
18) Imagine you are responsible for recruiting an engineering manager for team X, and you are down to your final two candidates:
1) Person A, a brilliant engineer with an impressive track record. They have expressed interest in furthering their career by becoming an Engineering Manager. Person A has been responsible for small feature teams as an Engineering Lead in the past. The teams they have managed so far have performed great. The feedback from Person A's directs has been reserved at best, highlighting that team members have felt awkward around them and that their social skills need improvement.
2) Person B, an enthusiastic Engineering Lead with a history of becoming a linchpin for all the teams they have worked with. They have brought to your attention lots of articles on leading and growing teams, and best people management practices. The teams they have managed so far have performed great. The feedback from their directs has been that they consider Person B an inspiring figure, but have had little input from them on technical aspects of the team's work.
Which of the two candidates would you choose?
Person A, because:
Person B, because:

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
If I heard of a team in another company with a great engineering manager I would consider moving there	C	0	O	C	C
An engineering manager that is technical is respected by their team	C	C	C	C	0
The engineering manager influences the success of the team	0	C	C	0	0
The engineering manager should be the person that makes the technical decisions in the team	C	0	C	0	C
The engineering manager should understand engineering,	C	0	0	C	c

but not practice it					
The most important goal for an engineering manager should be to drive execution excellence	0	C	C	C	0
The engineering manager should be the mentor for the engineers	0	0	C	C	0
Delegation is a way for an engineering manager to avoid performing certain tasks	0	0	C	C	0
The most important goal for an engineering manager should be talent retention in their team	C	0	0	0	C
The engineering manager should guide the team by providing solutions to coding problems	0	0	0	0	0

The primary concerns of engineering managers should be business-related	0	0	C	C	0
The engineering manager should have insight on discussions about alternative options for design or implementation	C	0	C	C	C

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Software engineers are more engaged if the engineering manager cultivates a fun atmosphere in the team	C	C	C	C	C
If I heard of a team with a great engineering manager I	C	C	C	0	0

would consider moving there					
The engineering manager should provide rationale for thinking about problems, rather than provide solutions	0	0	0	0	0
An engineering manager that is not technical is not respected by the team	0	0	C	C	0
The most important goal for an engineering manager should be explaining the merit of a team's mission to its members	C	0	0	0	0
The engineering manager influences the quality of the code	C	0	0	0	0

	Т	T	Т	Т	T
The primary concerns of engineering managers should not be technical	C	0	0	C	C
Delegation is a signal that the engineering manager trusts team members	c	0	0	C	C
The engineering manager should be data-driven in all their discussions	C	0	C	C	0
The engineering manager should be the shield from randomization	C	0	C	C	0
The engineering manager should guide the team by asking questions	0	0	0	0	0
The most important goal for an engineering manager should be making	0	0	0	0	0

engineers happy					
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	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The engineering manager should be the person that software engineers go to for technical guidance	0	0	0	0	0
The most important goal for an engineering manager should be to generate business impact	0	0	C	0	0
The engineering manager should be the team's best advocate	0	0	0	0	0
The engineering manager	0	0	0	0	c

should coach engineers in the team to be self- sufficient					
The most important goal for an engineering manager should be to clearly explain the desired outcomes for the team	0	C	0	0	0
I would leave the company if I didn't like my engineering manager	C	C	C	C	C
The primary concern of engineering managers should be growing a healthy team	0	C	0	C	C
The engineering manager should enable, rather than direct	0	0	0	0	C

Delegation is a way for the engineering manager to empower team members by giving them ownership over what they do	C	0	C	0	0
The engineering manager should contribute code to the project regularly	C	0	C	C	C
The engineering manager should hold back their technical opinion unless asked	0	0	0	C	C
The engineering manager should clearly state their technical opinion to the team	0	0	0	C	C

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The engineering manager should be the person that software engineers go to for coding help	C	C	C	C	C
Software engineers are more productive when their engineering manager takes an interest in their life outside work	0	0	0	0	0
The engineering manager should leave implementation decisions to the engineering team	0	0	0	0	0
The most important goal for an engineering manager should be to grow engineers	C	0	0	0	0
The engineering	c	0	0	0	0

manager should play a critical role in the motivation of the team					
Empathy for people is an important trait for an engineering manager	C	C	C	C	C
The engineering manager should coach engineers in the team to share effort, successes and failures	C	C	C	0	0
I would leave my team if I didn't like my engineering manager	0	C	C	0	0
The engineering manager influences the success of the product	0	C	C	0	0
The most important goal for an engineering manager should be to teach decision making to engineers	0	0	0	C	0

The engineering manager	0	0	0	0	0
influences the productivity of the team					

Wrap-up

23) Please rank the following factors that affect retention in an engineering team, from most important to least important.

The level of pay
The relationship with the engineering manager
The relationship between team members
How interesting the work is to engineers
The opportunity for career advancement
The working environment

24) How can a great software engineering manager have a positive or negative impact on the software his/her team produces?



After clicking "Submit" you will see instructions on how to enter the raffle for the gift cards. Good luck!

Thank You!

Thank you for taking our survey. Your response is very important to us.

As another way of saying thanks, we're raffling off two \$50 Amazon.com Gift Certificates (official rules of the sweepstakes). Click here to enter the raffle by email