

Help! I'm a Research Software Manager!

Four practices to be the manager your team, and research, needs



US-RSE Virtual Workshop 2021

Jonathan Dursi



Congratulations!
Research deserves the best support we can offer

Not A Promotion, It's a Career Change

**You've gone from
a very experienced coder to
a very junior manager**



photo credit: Nourdine Diouane on unsplash.com

No One Tells Us How

- Different work
- Need different set of skills
- Academia doesn't explicitly teach us these
- Few good examples
- Easy to feel at sea



photo credit: Mubariz Medizadeh on unsplash.com

But we can learn and master new tools

Because great management:

- **is not** mysterious
- **is not** about personality type
- **is not** super complex or hard
- **is** about learning and applying a new set of skills and practices

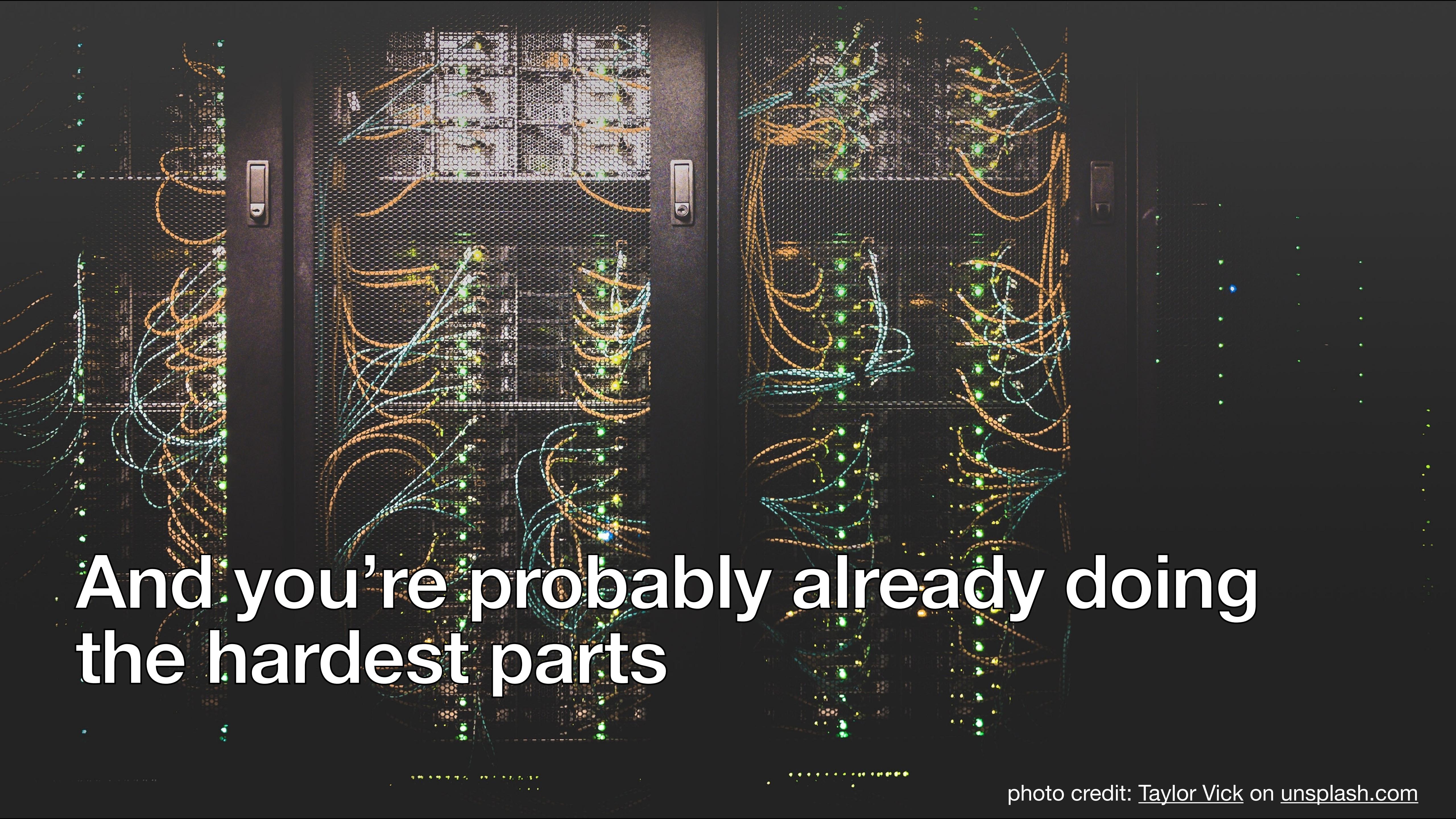


photo credit: Julie Molliver on unsplash.com

A photograph of a diverse group of women in a meeting room. In the foreground, a woman with curly hair and glasses is speaking into a microphone. Behind her, another woman with long brown hair looks on. To the right, two more women are seated at a table; one is wearing a yellow patterned blouse and the other is wearing a black leather jacket over a red top. The background shows a white wall and a window.

We know what good managers do

photo credit: [Christina @ wocintechchat.com](#) on [unsplash.com](#)

A photograph of a server rack in a dark room. The rack is filled with many cables, primarily in shades of green and orange, which are illuminated from within, creating a glowing effect against the dark background. The cables are bundled together and run vertically through the server units.

And you're probably already doing
the hardest parts

Google Project Oxygen

- 2009: Do managers matter?

The image shows a screenshot of the Harvard Business School (HBS) website's "Faculty & Research" section. At the top, the HBS logo and name are visible. Below the header, a large red banner displays the title "FACULTY & RESEARCH". A sub-menu bar below the banner includes links for "FACULTY", "RESEARCH", "FEATURED TOPICS", and "ACADEMIC UNITS". To the right of the menu, there is a search bar with the placeholder text "Faculty, publications, topics". The main content area features a yellow box containing the title "CASE | HBS CASE COLLECTION | APRIL 2013 (REVISED OCTOBER 2013)" followed by "Google's Project Oxygen: Do Managers Matter?". Below the title, it says "by David A. Garvin, Alison Berkley Wagonfeld and Liz Kind". Underneath the article, there are three small icons for "PRINT", "SHARE", and "EMAIL". The "Abstract" section follows, which is described in the text below. At the bottom of the page, there are "Keywords" (Organizational Behavior, Business Policy, General Management, Human Resource Management, Management, Leadership, Human Resources), language information ("Language: English | Format: Print | 24 pages"), and purchase options ("EDUCATORS" and "PURCHASE").

CASE | HBS CASE COLLECTION | APRIL 2013 (REVISED OCTOBER 2013)

Google's Project Oxygen: Do Managers Matter?

by David A. Garvin, Alison Berkley Wagonfeld and Liz Kind

PRINT SHARE EMAIL

Abstract

Google's Project Oxygen started with a fundamental question raised by executives in the early 2000s: do managers matter? The topic generated a multi-year research project that ultimately led to a comprehensive program, built around eight key management attributes, designed to help Google employees become better managers. By November 2012, the program had been in place for several years, and the company could point to statistically significant improvements in managerial effectiveness and performance. Now executives were wondering: how could Google build on the success of this project, extending it to senior leaders, teams, and other constituencies while striving to create truly amazing managers?

Keywords: Organizational Behavior; Business Policy; General Management; Human Resource Management; Management; Leadership; Human Resources

Language: English | Format: Print | 24 pages

EDUCATORS PURCHASE

Google Project Oxygen

- 2009: Do managers matter?
- Data comes in: Um, yeah.

The screenshot shows a web page from the Harvard Business School (HBS) website. At the top, the HBS logo and the text "HARVARD | BUSINESS | SCHOOL" are visible. Below this, a large red banner displays the title "FACULTY & RESEARCH". Underneath the banner, there is a navigation menu with links for "FACULTY", "RESEARCH", "FEATURED TOPICS", and "ACADEMIC UNITS". A search bar labeled "FIND" is located on the right side of the header. The main content area features a yellow background with the text "CASE | HBS CASE COLLECTION | APRIL 2013 (REVISED OCTOBER 2013)" and the title "Google's Project Oxygen: Do Managers Matter?". Below the title, it says "by David A. Garvin, Alison Berkley Wagonfeld and Liz Kind". There are also "PRINT", "SHARE", and "EMAIL" buttons. The "Abstract" section is described as follows: "Google's Project Oxygen started with a fundamental question raised by executives in the early 2000s: do managers matter? The topic generated a multi-year research project that ultimately led to a comprehensive program, built around eight key management attributes, designed to help Google employees become better managers. By November 2012, the program had been in place for several years, and the company could point to statistically significant improvements in managerial effectiveness and performance. Now executives were wondering: how could Google build on the success of this project, extending it to senior leaders, teams, and other constituencies while striving to create truly amazing managers?". The "Keywords" listed are: Organizational Behavior; Business Policy; General Management; Human Resource Management; Management; Leadership; Human Resources. At the bottom, it indicates the language is English and the format is Print, containing 24 pages. There are also buttons for "EDUCATORS" and "PURCHASE".

Google Project Oxygen

- 2009: Do managers matter?
- Data comes in: Um, yeah.
- 2012: Management starts to change across the company

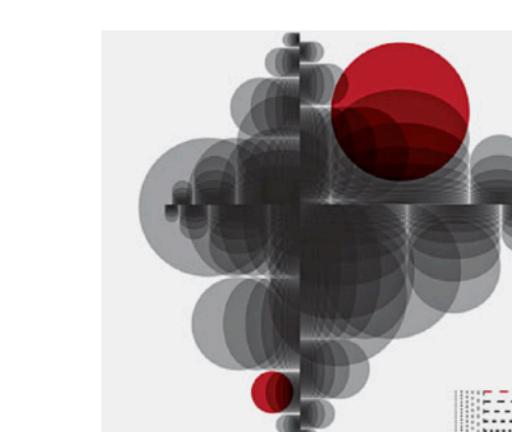


Harvard Business Review Leadership Development | How Google Sold Its Engineers on Management

How Google Sold Its Engineers on Management

by David A. Garvin
From the December 2013 Issue

Summary Save Share Comment Print \$8.95 Buy Copies



Artwork: Chad Hagen, Graphic Composition No. 1, 2009, digital

Since the early days of Google, through 2012, have had a skeptical view of management. The company's technocratic culture of software engineers has been skeptical of management, too. "We are a company that values simplicity," says Google CEO Larry Page. "It's time to make leadership simple again."

JIM CRAMER INVESTING PERSONAL FINANCE RETIREMENT TECHNOLOGY MARKETS HOW-TO VIDEO FINANCIAL ADVISOR CENTER

TheStreet



Google's Project Oxygen Pumps Fresh Air Into Management

It's time to make leadership simple again.

BRAD HALL - FEB 11, 2014 11:48 AM EST

Google Project Oxygen

- 2009: Do managers matter?
- Data comes in: Um, yeah.
- 2012: Management starts to change across the company
- Management training available online

The image is a collage of three screenshots. The top right screenshot shows the Google homepage with its iconic multi-colored logo. The middle screenshot is from the Harvard Business Review website, featuring an article titled "How Google Sold Its Engineers on Management" by David A. Garvin. The article includes a graphic composed of overlapping circles in shades of gray and red, and a photo of several people in business attire sitting around a conference table. The bottom screenshot is from the re:Work website, showing a section titled "Managers" with a subtext about their importance and impact on employee performance.

Leadership Development | How Google Sold Its Engineers on Management

How Google Sold Its Engineers on Management

by David A. Garvin

From the December 2013 Issue

Summary Save Share Comment Print \$8.95 Buy

Artwork: Chad Hagen, Graphic Composition No. 1, 2009, digital

Managers

Managers matter a lot and can have a huge impact on employee performance. Support your people by sharing what makes a great manager, providing development opportunities, celebrating great managers, and more.

Google Project Oxygen

- 2009: Do managers matter?
- Data comes in: Um, yeah.
- 2012: Management starts to change across the company
- Management training available online
- What Google found **wasn't new**, but has been very influential in computing

The image is a collage of three screenshots. The top right screenshot shows the classic Google homepage with its colorful logo. The middle left screenshot is from the Harvard Business Review website, featuring an article titled "How Google Sold Its Engineers on Management" by David A. Garvin. The bottom right screenshot is from the re:Work website, showing a section titled "Managers" which discusses the significance of management in the workplace.

Harvard Business Review

Leadership Development | How Google Sold Its Engineers on Management

How Google Sold Its Engineers on Management

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From the December 2013 Issue

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Since the Google through have value of management skepticism stems from a technocratic culture among software engineers. As one put it, “We are a company

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JIM CRAMER INVESTING PERSONAL FINANCE RETIREMENT TECHNOLOGY MARKETS HOW-TO VIDEO FINANCIAL ADVISOR CENTER

re:Work

SUBJECTS ▾ GUIDES CASE STUDIES BLOG

Managers

Managers matter a lot and can have a huge impact on employee performance. Support your people by sharing what makes a great manager, providing development opportunities, celebrating great managers, and more.

Google Project Oxygen

Things Great Managers Do

1. Good coaches.
2. Empower their team, not micro-manage.
3. Express interest in their team members' success and personal well-being.
4. Productive and results-oriented.
5. Good communicators and they listen to the team.
6. Help employees with career development.
7. Have a clear vision and strategy for the team.
8. Have key technical skills that help them advise the team

Key Shortcomings of Poor Managers

1. Have trouble making a transition to manager
2. Lack a consistent approach to performance management and career development
3. Spend too little time managing and communicating

RSE is collaborative and collaboration is hard

Academic collaborative project:

- Learn underlying needs from domain experts and team members
- Get agreement on objectives
- Get everyone working on their part
- Make sure grad students, postdocs develop their skills
- Get the software done, papers out, and resulting presentations



photo credit: [Christina @ wocintechchat.com](https://wocintechchat.com) on unsplash.com

Things Great Managers Do

1. Are good coaches.
 2. Empower their team, not micro-manage.
 3. Express interest in their team members' success and personal well-being.
 4. Have productive and results-oriented focus.
 5. Good communication and they listen to the team.
 6. Help employees with career development.
 7. Have a clear vision and strategy for the team.
 8. Have key technical skills that help them advise the team
- ✓ Help grad students and postdocs upskill
 - ✓ Get everyone working on their own part
 - ✓ Learn and meet team members needs
 - ✓ Get the software and paper out
 - ✓ Communicate needs between domain experts and software developers; presentations
 - ✓ Help grad students and postdocs upskill
 - ✓ Understand and communicate objectives
 - ✓ Have technical skills needed for project to advance

Just Need To Avoid Pitfalls - Learn the Basics

1. Having trouble making a transition to manager
2. Lacking a consistent approach to performance management
3. Spending too little time managing and communicating

But How?

Four things you can start doing to be a great manager

Well understood, time-tested, management techniques

One you can start now

- **Weekly one-on-ones** with your team members

Two you can start soon

- **Frequent, specific, feedback** - positive and negative - to your team members
- **Judiciously and increasingly delegate responsibility** to your team members

And one ongoing:

- **Understand that you're not a software developer** anymore

Avoiding Pitfalls

- 1. Having trouble making a transition to manager ✓ Acceptance
- 2. Lacking a consistent approach to performance management ✓ Feedback, Delegation
- 3. Spending too little time managing and communicating ✓ One-on-ones

Weekly one-on-ones

The simplest and most important thing you can start doing for your team

Weekly One-on-Ones

Learn and build trust

- **Every week**, have **scheduled** 30min one-on-one meetings with each direct report
- **Not** status report - get that elsewhere
- 10 minutes - whatever they want to talk about
- 10 minutes - whatever you have on your list to talk with them about
- 10 minutes - the future and their career development



photo credit: [Christina @ wocintechchat.com](#) on [unsplash.com](#)

Weekly One-on-Ones

Learn and build trust

- Pretty uncommon in academia
- Incredibly common elsewhere
- Ubiquitous in tech
- Lots of resources

The screenshot shows a Google search results page with the query "one-on-ones" in the search bar. The results are displayed under the "All" tab, with a total of "About 1,300,000,000 results (0.59 seconds)" shown. The first result is from hbr.org, titled "How to Make Your One-on-Ones with Employees More ...". Below it is a result from www.friday.app, titled "One-on-Ones (A manager's guide) | Friday.app". A "People also ask" box is visible on the right, containing questions like "What are one on ones for?", "How do you get an effective 1 on 1?", "How do you do a one on one conversation?", and "How often should you have one on ones?". Further down the page are results from www.15five.com, www.impraise.com, getlighthouse.com, and wavelength.asana.com.

Google search results for "one-on-ones":

- [About 1,300,000,000 results \(0.59 seconds\)](#)
- [hbr.org › 2016/08 › how-to-make-your-one-on-ones-w...](#)
How to Make Your One-on-Ones with Employees More ...
How to Make Your One-on-Ones with Employees More Productive. by; Rebecca Knight.
August 08, 2016. Save; Share; Comment; Print; PDF; 8.95 Buy Copies.
- [www.friday.app › one-on-ones](#)
One-on-Ones (A manager's guide) | Friday.app
One-on-ones are a great way for managers, directors, and executives to build stronger teams. 1:1 meetings can ...
Jun 26, 2020 - Uploaded by Friday
- People also ask**
 - What are one on ones for?
 - How do you get an effective 1 on 1?
 - How do you do a one on one conversation?
 - How often should you have one on ones?
- [Feedback](#)
- [www.15five.com › blog › one-on-one-meeting-checklist](#)
The Only One On One Meeting Checklist You Will Ever Need
One on ones are a powerful productivity tool for any organization. Use this one on one checklist to ensure you're making the most out of every meeting.
- [www.impraise.com › blog](#)
1-on-1s for engaged employees: How good managers run ...
One-on-ones can be about almost anything. If you're not sure what to cover, there are tools available today that can integrate to your wider performance ...
- [getlighthouse.com › blog › one-on-ones-employee-know](#)
One-on-ones: What Every Employee Should Know
One-on-ones are private, safe conversations. If there's something you want to be critical or outspoken on, this can be a better forum than a full team or full company ...
- [getlighthouse.com › blog › how-to-start-one-on-ones-y...](#)
How to Start One on Ones with Your Team - Get Lighthouse
When you decide to start one on ones with your team, there's a lot to do to start off on the right foot. Get started like a pro with this guide.
- [wavelength.asana.com › workstyle-what-is-a-1-1](#)
What is a 1-1 meeting? - Wavelength

Weekly One-on-Ones

Learn and build trust

- Show they have your undivided attention
 - Have a recurring appointment and don't skip them
 - Take notes, without a keyboard
- Learn about your team member and their work
- Learn things that they need from you (information, get things unstuck, introductions, career development)
- Let them know they'll get them
- Build trust by following through
- Review notes periodically



photo credit: [Christina @ wocintechchat.com](https://unsplash.com/@wocintechchat) on unsplash.com

Weekly One-on-Ones

Learn and build trust

- Easily the most valuable time you'll spend a manager
- By doing this, you'll:
 - Understand your team members much better
 - Understand what's going on much better
 - Show you care and build trust
 - Start feeling like you can manage



photo credit: [Christina @ wocintechchat.com](#) on [unsplash.com](#)

Frequent, Specific, Feedback

Let people know how they're doing

Specific Feedback

Behaviour and Impact

- Developers deserve to know what they're doing well and what they should change, as early as possible
- Software developers feel more productive when they're getting useful feedback about job performance
- Lots of research on what works:
 - Prompt
 - Specific - know what to do
 - Focus on behaviour + impact



photo credit: [Jon Tyson](#) on [unsplash.com](#)

Specific Feedback

Behaviour and Impact

- SBI: situation, behaviour, impact
- **Bad:** “Nice job on the presentation!”
- **Good:** “In today’s presentation, you covered the background material very clearly. It really helped Prof X’s group understand what we need to do”



photo credit: [Jon Tyson](#) on [unsplash.com](#)

Specific Feedback

Behaviour and Impact

- SBI: situation, behaviour, impact
- **Bad**: “You need to get better at doing code reviews”
- **Good**: “On the PR for the updated model, it took a week for you to do the review. That blocked Nayeli’s progress for half the sprint”.



photo credit: [Jon Tyson](#) on [unsplash.com](#)

Specific Feedback

Behaviour and Impact

- Not about blame or praise, but clarity of expectations
- Nudging people to those expectations *in the future*
- Most feedback should be positive
- Take time to call out specific things they're doing that help you or the team
- Frequent, small, early feedback prevents many Big Conversations



photo credit: [Jon Tyson](#) on [unsplash.com](#)

Increasingly Responsible Delegation

Help your team members grow and take increasing responsibility

Increasing Delegation

Helping your team members grow

- Keep an eye out for matches between:
 - Tasks of yours you already know how to do
 - Team members for whom the task might be a bit of a welcome stretch
- Tell them why you think this would be a good match for them and ask if they'd be willing to do it
- If so, give them support they need as they learn



photo credit: Scott Graham on [unsplash.com](#)

Increasing Delegation

Helping your team members grow

- Done well helps your team members grow their skills,
- **And** gives you room to grow and tackle new challenges
- Requires knowledge of your team members (one-on-ones)...
- ...and the ability to give them guidance (specific feedback)



photo credit: Scott Graham on unsplash.com

**You're not a developer
anymore**

Growing into your new role starts with leaving your old one behind

Accept your new role

Help your team members

- The job is to make your team more effective, not write code yourself
- You're no longer a maker, you're a multiplier
- “Glue work”: coordination, collaboration, prioritization, conflict resolution, decision making
- Helping your team members advance their skills and careers
- A lot easier to do let go of coding tasks when you know what management tasks look like



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You can do this

You can do this

You've learned harder stuff

- Mastering new techniques is hard
- Starting some of these practices may be uncomfortable
- You've learned harder skills than these, and felt awkward or clumsy until you mastered them
- But they were necessary for what you wanted to accomplish



photo credit: Jordan Wozniak on unsplash.com

You can do this

You've learned harder stuff

- Start one-on-ones in the coming month - give you time to prepare
- Over a couple months, learn about giving specific feedback, then start
- As you get to know your team members career goals better, start targeted delegation
- If you're doing some or most of these things after 4-6 months, you're doing great
- And there's lots of resources to help



photo credit: Jordan Wozniak on unsplash.com



Research deserves the best support we can offer

And you can be the manager your team, and research, needs

Resources

Weekly One-on-Ones

Resources

- [Manager-Tools basics podcasts](#)
- [The Manager's Path: Camille Fournier](#)
- re:Work @ Google [one-on-one guide](#)
- [An online list of good one-on-one resources.](#)
- [Huge list of potential questions](#)
- My [quickstart guide for remote one-on-ones](#) early in the pandemic



photo credit: [Christina @ wocintechchat.com](#) on [unsplash.com](#)

Specific Feedback Resources

- Manager-Tools basics podcasts
- re:Work @ Google's Situation-Behaviour-Impact model
- Three feedback models
- Don't use "sandwich" feedback, it doesn't work
- Software developers feel more productive when they're getting useful feedback about job performance



photo credit: [Jon Tyson](#) on [unsplash.com](#)

Delegation Resources

- Manager-Tools basics podcasts
- Manager-Tools Responsibility Ladder podcasts
- An Engineering Team where Everyone is a Leader - Gergely Orosz



photo credit: [Scott Graham](#) on [unsplash.com](#)

Growing Into Your Role

Resources

- re:Work new manager training guide
- The Manager's Path: Camille Fournier
- Lab Dynamics: Cohen & Cohen
- Rands (tech) leadership slack
- I have a weekly link roundup newsletter on the topic of managing research computing teams



photo credit: Gaelle Marcel on unsplash.com

Resources

At <https://www.ResearchComputingTeams.org/USRSE2021> you can find

- A PDF of these slides
- A video recording of this talk, and
- An ebook with step-by-step instructions to starting one-on-ones with your team over the course of a month