

## Introduction – Team leadership

Research management is increasingly complex. Heterogeneous demands are placed on research group leaders through heightened accountability combined with tight competition for increasingly scarce funds. Disciplinary and strictly scientific exigencies run in parallel to more societal oriented agendas such as Responsible Research and Innovation (RRI) while research itself increasingly requires an entrepreneurial approach. The research group is the basic organizational unit under the direct management of the team leader where these demands are played out.

## Why are team leaders important?

Research group leaders have a pivotal position in-between the wider research environment and the direct management of human resources and social relations “in the lab”. Leaders are responsible for developing a resource strategy, the management of the research process itself (staff hiring, team climate), motivating peers through their scientific leadership as well as securing the visibility and collaboration network of the group. Gender and wider diversity aspects are important across these team dimensions. Apart from the organizational context, team leaders are key for setting the overall attitude towards gender issues inside the team that range from monitoring equal participation of all team members to guaranteeing a safe, harassment free environment.

## Key points and recommendations

Having a competitive but cohesive research team depends on many factors that can broadly be divided into two areas: first, access to a diverse set of resources (funds, ideas, knowledge, etc.) and second, the management of these (diverse) resources in order to achieve the team's (scientific) vision. The key process to highlight is “information integration” during which team members collaborate in order to convert distributed, personal information and experience into new knowledge. Gender bias can undermine this team effort – with team leaders holding a key position to mitigate its effects.

- Awareness raising concerning gender bias in science and teams is a crucial first step. However, lecture based anti-bias training without transfer to real work contexts is of limited value. Team leaders can actively challenge stereotypes by facilitating regular contact among all team members and alternating roles and responsibilities among staff such as inclusion of seniors and more juniors roles in decision-making. Leaders should challenge team members concerning their socio-cultural assumptions regarding their colleagues.
- Among the most important elements of a well-functioning team is mutual “trust” among its members. Researchers and other staff need to feel safe in order to voice potentially “risky” ideas or be critical with peers. Team leaders are vital for nurturing a healthy team climate for example through team building activities. In addition, leaders attitudes towards harassment and mistreatment set the overall tone of what is “tolerated”, enforcing organizational policies

and hence a safe work environment.

- The importance of effective communication can hardly be overstated for well-functioning teams. However, status and power hierarchies condition which information gets shared. Leaders need to assure equal participation of women and men across junior and seniority roles in meetings and make sure all voices are heard. Conflict can be a valuable resource to prevent premature conclusions – but needs to be monitored in order to not spiral out of control.
- Nonverbal communication (eye contact, turn-taking, body posture) is important for the reproduction of gendered interaction hierarchies. These semi-automatic gestures are hard to address and change. Newer research shows that simple tricks such as taking team members for a walk breaks up confrontational and exposed communication settings (meetings) in favor of less biased, safer interaction styles.
- Team leaders are also responsible for establishing mechanism within the team for distribution the credit of collective work. Given the positive role of teams for mitigating the productive gap between women and men, team leaders have to assure fair and transparent allocation rules that benefit all members equally.
- A variety of team training schemes do exist that assist team leaders to be attentive not just the scientific leadership but to foster and train team skills (e.g. communication) as well as team attitudes (trust, team orientation). “Cross-training” specifically can help teams to develop knowledge about roles and capabilities of diverse team members.

## Five Must Reads

Bennett, Michelle L., Howard Gadlin, and Christophe Marchand. 2018. “Collaboration and Team Science: A Field Guide. 2nd Edition.” 18–7660. National Cancer Institute, U.S. Department of Health & Human Service. → *Excellent practitioners guide to building effective teams*

Vaan, Mathijs de, Balazs Vedres, and David Stark. 2015. “Game Changer: The Topology of Creativity.” *American Journal of Sociology* 120 (4): 1144–94. → *Thorough analysis of how to pitch for innovative teams*

Ridgeway, Cecilia L. 2008. “Framed Before We Know It: How Gender Shapes Social Relations.” *Gender & Society* 23 (2): 145–60. → *Clarifies how gender affects and potentially biases group interactions*

National Research Council (U.S.), Nancy J. Cooke, and Margaret L. Hilton, eds. 2015. *Enhancing the Effectiveness of Team Science*. Washington, D.C: The National Academies Press. → *Extensive section on team leadership across the seven dimensions of team science.*

Meyer, Bertolt, Michael J. Burtscher, Klaus Jonas, Sebastian Feese, Bert Arnrich, Gerhard Tröster, and Carsten C. Schermuly. 2016. “What Good Leaders Actually Do: Micro-Level Leadership Behaviour, Leader Evaluations, and Team Decision Quality.” *European Journal of Work and Organizational Psychology* 25 (6): 773–89. → *Nonverbal leadership behavior*