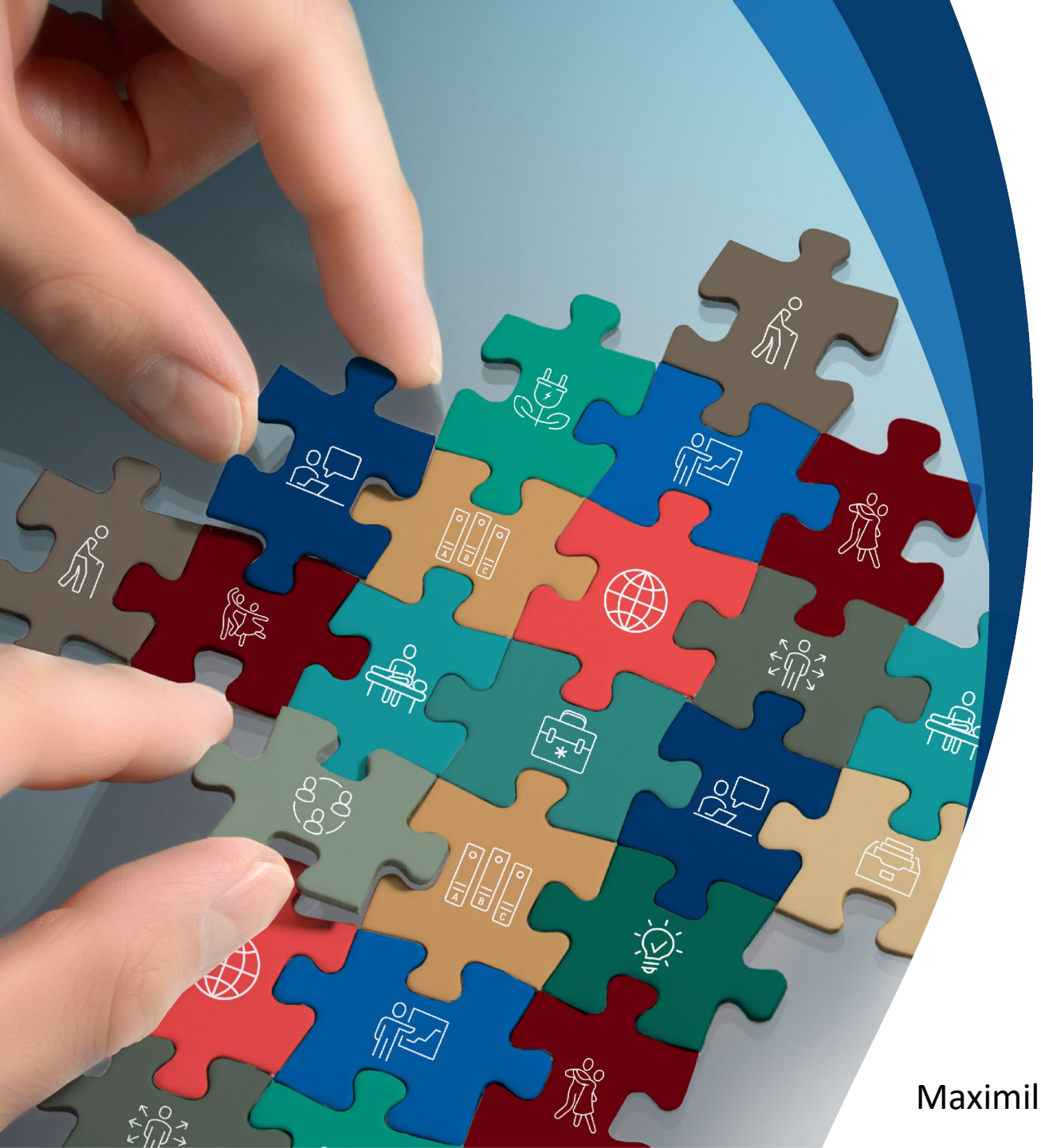


An empirical research of shared leadership in product development projects

A view into the German automotive industry

Maximilian Müller

19 March, 2021

Alma Mater Europaea ECM

Agenda

- Introduction
- Method
- Results
- Discussion
- Boundaries and Limitations
- Conclusion

ALMA MATER EUROPAEA ECM

Leadership (Motivation)

- In 2013, approximately **a third of all work** in Germany **are project activities**, and it shows an increase (Schoper et al. 2018).
- The **failure rate** among projects **are high** in regard to cost overruns, delay and underperformance (Cicmil et al. 2009; Evrard and Nieto-Rodriguez 2004).
- Project manager **leadership is a significant factor** for project **performance** and **success** (Muller and Turner 2007; Larsson et al. 2015).
- Project **leadership** should be the most **promising field of research** in the future (Lindgren and Packendorff 2009).

ALMA MATER EUROPAEA ECM

Leadership (Brief overview)

Main schools of leadership (Dulewicz and Higgs 2003; Turner and Müller 2005)

- Trait school (Popularity 1940s)
- Behavior or style school (Popularity 1940s-1960s)
- Contingency school (Popularity 1960s-1970s)
- Visionary or charismatic school (Popularity 1980s-1990s)
- Emotional intelligence school (Popularity late 1990s)
- Competency school (Popularity late 1990s)

Leadership (Definitions)

"Leadership is a multi-level (person, dyad, group, collective) **leader-follower interaction** process that occurs in a particular situation (context) where a leader (e.g. superior, supervisor) and followers (e.g. subordinates, direct reports) **share a purpose** (vision, mission) and jointly **accomplish things** (e.g. goals, objectives, tasks) willingly (e.g. without coercion)." (Yammarino 2013, p.150).

Leadership (in projects)

- **Leadership directly links with project success** (Müller and Turner 2007; Geoghegan and Dulewicz 2008).
- Different **leadership styles** are appropriate for different types of project (Müller and Turner 2007; Thite 1999).
- **Leadership competency** has a positive impact on project success (Khan et al. 2014).
- **Transformational** leadership has positive effects on projects (Miyamoto 2015; Aga et al. 2016).

Leadership (challenges)

- Leadership emergent from the **industrial age** (1800s) and research focus on the **top-down approach** to increase production factories' efficiency (Pearce and Manz 2005).
- **No single leader has all the relevant, appropriate knowledge in every situation** (Pearce and Conger 2002; Perry et al. 1999).
- We are in a **knowledge economy**, but our managerial and governance systems are stuck in the industrial era. It is time for a whole new model (Manville & Ober 2003).

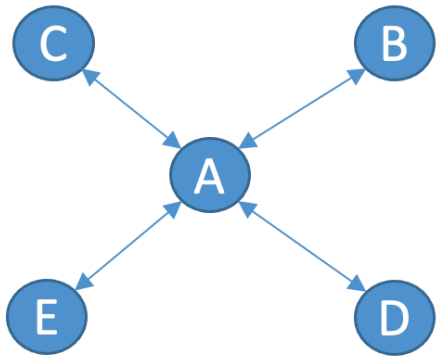
Leadership (new paradigm)

- New stream called shared leadership (Pearce and Conger 2002).
  - Similar approach like balanced Leadership (Müller and Packendorff 2017), collective leadership (Denis et al. 2001), collaborative leadership (Rosenthal 1998), distributed leadership (Gronn 2002), team leadership (Zaccaro et al. 2001), and many more.

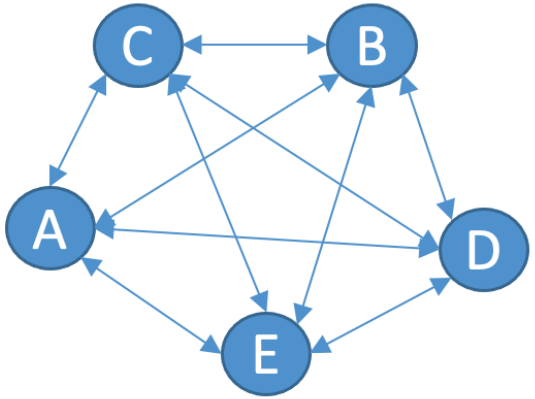
- **Leadership** is seen as a function that can be **shared among team members**, with all team members making constructive suggestions to **achieve shared team goals** (Conger and Pearce 2003).

ALMA MATER EUROPAEA ECM

Leadership (vertical vs shared)



Centralized Leadership (DeRue 2011; p.133)



Shared Leadership (DeRue 2011; p.133)

ALMA MATER EUROPAEA ECM

Def. Shared Project Leadership

- Scott–Young et al. (2019) defined in their literature review (systemic review):
- Shared leadership in projects ...
  - emerges as a dynamic, interactive, fluid, cycle process (D‘Innocenczo et al. 2016),
  - distributed across multiple project members (Pearce and Conger 2002),
  - at different times (Kozlowski et al. 2016),
  - and different phases in the team and project life cycle (Wu and Comrican 2016).

Research Gap

- In the project management field, research on **shared leadership is less frequent**, and knowledge is even more poorly developed (Muethel and Hoegl 2016).
- There has been **limited research on shared leadership** in project management (Scott-Young et al. 2019).
- Study **leadership as practices** rather than competence held by individual managers (Carroll et al. 2008; Bolden and Gosling 2006).
- There is a need for more **practice-oriented empirical studies** on project management (Lindgren and Packendorff 2009).

ALMA MATER EUROPAEA ECM

Product development project (PDP)

- Product development projects have to adapt because of the **dynamic** business **environment's** challenges (Steffens et al. 2007).
- New product development projects are growing more and more **complex** (Yang et al. 2014).
- A product development project is also a **complex** web of interactions involving many overlapping activities and interdependent components (Yang et al. 2015).
- Often, before project execution starts, there is **no precise understanding** of the detailed project tasks, task sequence, task interdependencies and task time (Tatikonda and Rosenthal 2000).
- New product development projects **uncertainty** results from a lack of information to perform the required tasks (Hwang et al. 2019; Yan and Dooley 2013).
- Compounding the problem is that the **failure rate** for new products **is** alarmingly **high** (Clancy and Stone 2005).

Research Question

- Research Question: How many project members can be identified as leaders in a product development project (PDP) team?
- Sub Research Question: What are the most relevant criteria for a leader in a product development project?

Step1: What are the criteria?

↓

Step2: How many leaders can be identified?

ALMA MATER EUROPAEA ECM

Method

- Sub Research Question: What are the most relevant criteria for a leader in a product development project?

- Qualitative Research: Literature Review
- Source: Scopus & Google Scholar
- Criteria: Criteria needs to apply in daily activity, criteria are applied in current research, relevance in the research, exclude personality factors (like traits) and competencies

ALMA MATER EUROPAEA ECM

Results

- Sub Research Question: What are the most relevant criteria for a leader in a product development project?

- Adopted from Ensley, Hmieleski & Pearce 2006: directive, transactional, transformational and empowering leadership behavior.
  - **Directive:** Assigned goals, instruction and command
  - **Transactional:** Rewarding, and Management by exception
  - **Transformational:** Visioning, Idealism, Performance Expectation, Inspirational communication, intellectual stimulation
  - **Empowering:** self-reward, teamwork, participative goal setting, independent action, opportunity thinking, self-development
- Duration of leading: more than 5 activities in a week (or 4 hours a week)

ALMA MATER EUROPAEA ECM

Method

- Research Question: How many project members can be identified as leaders in a PDP team?

- Empirical Approach (product development project in the automotive industry).
- Qualitative Approach: Ethnographical strategy (3 weeks: daily diaries, interviews, team todo lists, observations in virtual meetings).
- 8 project teams with approx. 7-22 team members.

ALMA MATER EUROPAEA ECM

Results

- **Many leaders** in all PDP teams were identified
  - **Strong** shared leadership, especially in **technical topics**
    - 4-8 different project members with leadership activities in each team for technical topics (but not an official leader role)
  - **Weak** shared leadership regarding **time and cost activities**
    - One dedicated and one substitute in each team
- The leading activities of a dedicated project manager are approx. 30 - 50 %.
- The technical leading activities of the project members are approx. 20 -30 %.
- **Technical leadership activities** are in **smaller teams** and mostly **short terms**.
- **Cost and time leadership activities** are in the whole team relevant and mostly **long terms**.
- In most cases (95%), the dedicated project manager knows the people leading the technical topics.

ALMA MATER EUROPAEA ECM

Discussion

- **Criteria identified** to identify the leaders in daily activities.
- My empirical research **identified many leaders** in a PDP.
  - Difference between time, cost and technical activities.
- A PDP in automotive industry is **technical driven** and the most topics are technical related.
- Shared leadership is an **activity-oriented phenomenon** and changed over time.
- The **results are in line** with shared leadership research.

Boundaries and Limitations

- The observed projects are currently in the **development phase**.
- The project is planned for five years and the **teams** work together **for two years**.
- Empirical data were a collection of product development projects in the **automotive industry.**
- Due to Corona, the teams are at home (**virtual teams**) during the observation time.
- There is **no link to the success** or efficiency of project teams.

ALMA MATER EUROPAEA ECM

Conclusion

- **Contribute** to the development of project leadership and general **leadership theory** with new empirical settings.
- Shared leadership is not only a theoretical framework. It is widespread **in practice** and should be taken seriously.
- Focus was the study on the **everyday actions** and interaction of leadership. This is in line with Gronn's (2002) suggestion for the study of leadership activities.
- For the practical implication, support the development of technical leaders in the project.
- The number of 8 teams and **observation time** should **extend** to get better results.

ALMA MATER EUROPAEA ECM

References

- AGA, D. Assefa; NOORDERHAVEN, Niels; VALLEJO, Bertha. Transformational leadership and project success: The mediating role of team-building. International Journal of Project Management, 2016, 34. Jg., Nr. 5, S. 806-818.
- BOLDEN, Richard; GOSLING, Jonathan. Leadership competencies: time to change the tune?. Leadership, 2006, 2. Jg., Nr. 2, S. 147-163.
- CICMIL, Svetlana, et al. Project management behind the façade. Ephemera: theory and politics in organization, 2009, 9. Jg., Nr. 2, S. 78-92.
- CLANCY, Kevin J.; STONE, Randy L. Don't blame the metrics. Harvard Business Review, 2005, 83. Jg., Nr. 6, S. 26-+.
- CONGER, Jay A.; PEARCE, Craig L. A landscape of opportunities. Shared leadership. Reframing the hows and whys of leadership, 2003, S. 285-303.
- CARROLL, Brigid; LEVY, Lester; RICHMOND, David. Leadership as practice: Challenging the competency paradigm. Leadership, 2008, 4. Jg., Nr. 4, S. 363-379.
- DENIS, Jean-Louis; LAMOTHE, Lise; LANGLEY, Ann. The dynamics of collective leadership and strategic change in pluralistic organizations. Academy of Management journal, 2001, 44. Jg., Nr. 4, S. 809-837.
- DeRue, D. S. (2011). Adaptive leadership theory: Leading and following as a complex adaptive process. Research in organizational behavior, 31, 125-150.

ALMA MATER EUROPAEA
ECM

References

- DULEWICZ, S. V.; HIGGS, Malcolm J. Design of a new instrument to assess leadership dimensions and styles. Selection and development review, 2004, 20. Jg., Nr. 2, S. 7-12.
- D'INNOCENZO, Lauren; MATHIEU, John E.; KUKENBERGER, Michael R. A meta-analysis of different forms of shared leadership–team performance relations. Journal of Management, 2016, 42. Jg., Nr. 7, S. 1964-1991.
- ENSLEY, Michael D.; HMIELESKI, Keith M.; PEARCE, Craig L. The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. The leadership quarterly, 2006, 17. Jg., Nr. 3, S. 217-231.
- EVRARD, Daniel; NIETO-RODRIGUEZ, A. Boosting business performance through programme and project management. 2004.
- GEOGHEGAN, Linda; DULEWICZ, Victor. Do project managers' leadership competencies contribute to project success?. Project Management Journal, 2008, 39. Jg., Nr. 4, S. 58-67.
- GRONN, Peter. Distributed leadership as a unit of analysis. The leadership quarterly, 2002, 13. Jg., Nr. 4, S. 423-451.
- HWANG, Sunil, et al. Interorganizational information processing and the contingency effects of buyer-incurred uncertainty in a supplier's component development project. International Journal of Production Economics, 2019, 210. Jg., S. 169-183.
- HOEGL, Martin; MUETHEL, Miriam. Enabling shared leadership in virtual project teams: A practitioners' guide. Project Management Journal, 2016, 47. Jg., Nr. 1, S. 7-12.

ALMA MATER EUROPAEA ECM

References

- KHAN, S.; LONG, C. S.; IQBAL, S. M. J. Leadership competency: A tool for project success. Middle East Journal of Scientific Research, 2014, 19. Jg., Nr. 10, S. 1280-1283.
- LARSSON, Johan, et al. Leadership in civil engineering: Effects of project managers' leadership styles on project performance. Journal of management in engineering, 2015, 31. Jg., Nr. 6, S. 04015011.
- Lindgren, M., & Packendorff, J. (2009). Project leadership revisited: Towards distributed leadership perspectives in project research. International Journal of Project Organisation and Management, 1(3), 285-308.
- KOZLOWSKI, Steve WJ; MAK, Stanton; CHAO, Georgia T. Team-centric leadership: An integrative review. Annual Review of Organizational Psychology and Organizational Behavior, 2016, 3. Jg., S. 21-54.
- Manville, B., & Ober, J. (2003). Beyond empowerment: Building a company of citizens. Harvard business review, 81(1), 48-53.
- MIYAMOTO, Michiko. Leadership in ITC project management in Japan. Procedia Computer Science, 2015, 64. Jg., S. 32-39.
- MUETHEL, Miriam; HOEGL, Martin. Expertise coordination over distance: Shared leadership in dispersed new product development teams. In: Leadership lessons from compelling contexts. Emerald Group Publishing Limited, 2016.
- MÜLLER, Ralf; TURNER, J. Rodney. Matching the project manager's leadership style to project type. International journal of project management, 2007, 25. Jg., Nr. 1, S. 21-32.
- PERRY, Monica L.; PEARCE, Craig L.; SIMS JR, Henry P. Empowered selling teams: How shared leadership can contribute to selling team outcomes. Journal of Personal Selling & Sales Management, 1999, 19. Jg., Nr. 3, S. 35-51.

ALMA MATER EUROPAEA ECM

References

- MÜLLER, Ralf; PACKENDORFF, Johann; SANKARAN, Shankar. Balanced leadership: A new perspective for leadership in organizational project management. Cambridge handbook of organizational project management, 2017.
- PEARCE, Craig L.; CONGER, Jay A. Shared leadership: Reframing the hows and whys of leadership. Sage Publications, 2002.
- PEARCE, Craig L.; MANZ, Charles C. The new silver bullets of leadership: The importance of self-and shared leadership in knowledge work. 2005.
- SCOTT-YOUNG, Christina M.; GEORGY, Maged; GRISINGER, Andrew. Shared leadership in project teams: An integrative multi-level conceptual model and research agenda. International Journal of Project Management, 2019, 37. Jg., Nr. 4, S. 565-581.
- STEFFENS, Wolfgang; MARTINSUO, Miia; ARTTO, Karlos. Change decisions in product development projects. International Journal of Project Management, 2007, 25. Jg., Nr. 7, S. 702-713.
- ROSENTHAL, Cindy Simon. Determinants of collaborative leadership: Civic engagement, gender or organizational norms?. Political research quarterly, 1998, 51. Jg., Nr. 4, S. 847-868.
- SCHOPER, Yvonne-Gabriele, et al. Projectification in Western economies: A comparative study of Germany, Norway and Iceland. International Journal of Project Management, 2018, 36. Jg., Nr. 1, S. 71-82.
- SPILLANE, James P.; HALVERSON, Richard; DIAMOND, John B. Towards a theory of leadership practice: A distributed perspective. Journal of curriculum studies, 2004, 36. Jg., Nr. 1, S. 3-34.

ALMA MATER EUROPAEA
ECM

References

- TATIKONDA, Mohan V.; ROSENTHAL, Stephen R. Technology novelty, project complexity, and product development project execution success: a deeper look at task uncertainty in product innovation. IEEE Transactions on engineering management, 2000, 47. Jg., Nr. 1, S. 74-87.
- THITE, Mohan. Identifying key characteristics of technical project leadership. Leadership & Organization Development Journal, 1999.
- TURNER, J. Rodney; MÜLLER, Ralf. The project manager's leadership style as a success factor on projects: A literature review. Project management journal, 2005, 36. Jg., Nr. 2, S. 49-61.
- WU, Qiong; CORMICAN, Kathryn. Shared leadership and team creativity: A social network analysis in engineering design teams. Journal of technology management & innovation, 2016, 11. Jg., Nr. 2, S. 2-12.
- YAMMARINO, Francis. Leadership: Past, present, and future. Journal of Leadership & Organizational Studies, 2013, 20. Jg., Nr. 2, S. 149-155.
- YAN, Tingting; DOOLEY, Kevin J. Communication intensity, goal congruence, and uncertainty in buyer–supplier new product development. Journal of Operations Management, 2013, 31. Jg., Nr. 7-8, S. 523-542.
- YANG, Qing, et al. The impact of uncertainty and ambiguity related to iteration and overlapping on schedule of product development projects. International Journal of Project Management, 2014, 32. Jg., Nr. 5, S. 827-837.

ALMA MATER EUROPAEA
ECM

References

- YANG, Qing, et al. Identifying and managing coordination complexity in global product development project. International Journal of Project Management, 2015, 33. Jg., Nr. 7, S. 1464-1475.
- ZACCARO, Stephen J.; RITTMAN, Andrea L.; MARKS, Michelle A. Team leadership. *The leadership quarterly*, 2001, 12. Jg., Nr. 4, S. 451-483.

ALMA MATER EUROPAEA
ECM

Backup

Directive

Assigned goals

My project manager (members) establish my performance goals

My project manager (members) reprimands me when my performance is not up to par.

When my work is not up to par, my project manager (members) points out it to me

Instruction and command

When it comes to my work, my project manager (members) gives me instructins on how to carry it out.

My project manager (members) gives me instructions about how to do my work.

My project manager (members) provides commands in regard to my work.

ALMA MATER EUROPAEA ECM

Backup

Transactional

Material reward

My project manager (members) will recommend that I am copensated well if I perform well.

My project manager (members) will recommend that I am copensated more if I perform well.

If I perform well, my project leader (members) will recommend more compensation.

Personal reward

My project manager (members) gives me positive feedback when I perform well.

My project manager (members) commends my when I do a better-than-average job.

My project manager (members) gives me special recognition when my work performance is especially good

Management by exception (active)

My project manager (members) focuses attention on irregulars, mistakes, exceptions, and deviations from standard.

My project manager (members) closely monitors my performance for errors.

My project manager (members) spends time "putting out fires"

My project manager (members) tracks mistakes.

My project manager (members) directs attention toward failure to meet standards.

Management by exception (passive)

My project manager (members) allows performance to fall below minimum standards before trying to make improvements

My project manager (members) delays taking action until problems become serious.

My project manager (members) tell me what I've done wrong rather than what I've done right.

My project manager (members) wait until things have gone wrong before taking action.

My project manager (members) shows firm belief in "if it ain't broke don't fix it."

ALMA MATER EUROPAEA ECM

Backup

Transformational

Performance expectations

My project manager (members) expects (expect) me to perform at my highest level.

My project manager (members) encourages (encourage) me to go above and beyond what is normally expected of one (e.g., extra effort).

My project manager (members) expects (expect) me to give 100% all of the time.

Challenge to status quo

My project manager (members) isn't (aren't) afraid to "buck the system" if he/she (they) thinks (think) it is necessary.

My project manager (members) is (are) non-traditional type(s) that "shakes up the system" when necessary.

My project manager (members) isn't (aren't) afraid to "break the mold" to find different ways of doing things.

Vision

My project manager (members) provides (provide) a clear vision of who and what our team is.

My project manager (members) provides (provide) a clear vision of where our team is going.

Because of my project manager (members), I have a clear vision of our team's purpose.

Idealism

My project manager (members) is (are) driven by higher purposes or ideals.

My project manager (members) has (have) a strong personal dedication to higher purposes or ideals.

My project manager (members) strives (strive) towards higher purposes or ideals.

Inspirational communication

My project manager (members) shows (show) enthusiasm for my efforts.

My project manager (members) approaches (approach) a new project or task in an enthusiastic way.

My project manager (members) stresses (stress) the importance of our team to the larger organization.

Intellectual stimulation

My project manager (members) emphasizes (emphasize) the value of questioning team members.

My project manager (members) encourages (encourage) me to rethink ideas which had never been questioned before.

My project manager (members) questions (question) the traditional way of doing things.

My project manager (members) seeks (seek) a broad range of perspectives when solving problems.

My project manager (members) looks (look) at problems from many different angles.

ALMA MATER EUROPAEA ECM

Backup

Empowering

Encourage self-reward

My project manager (members) encourages (encourage) me to treat myself to something I enjoy when I do a task especially well.

My project manager (members) urges (urge) me to reward myself with something I like when I have successfully completed a major task.

My project manager (members) encourages (encourage) me to give myself a pat on the back when I meet a new challenge.

Encourage teamwork

My project manager (members) encourages (encourage) me to work together with other individuals who are part of the team.

My project manager (members) urges (urge) me to work as a team with other individuals who are part of the team.

My project manager (members) advises (advise) me to coordinate my efforts with other individuals who are part of the team.

Participative goal setting

My project manager (members) and I work together to decide what my performance goals should be.

My project manager (members) and I sit down together and reach agreement on my performance goals.

My project manager (members) works (work) with me to develop my performance goals.

Encourage independent action

My project manager (members) encourages (encourage) me to search for solutions to my problems without supervision.

My project manager (members) encourages (encourage) me to find solutions to my problems without his/her (their) direct input.

My project manager (members) advises (advise) me to solve problems when they pop up without always getting a stamp of approval.

My project manager (members) urges (urge) me to assume responsibilities on my own.

Encourage opportunity thinking

My project manager (members) advises (advise) me to look for the opportunities contained in the problems I face.

My project manager (members) encourages (encourage) me to view unsuccessful performance as a chance to learn.

My project manager (members) urges (urge) me to think of problems as opportunities rather than obstacles.

Encourage self-development

My project manager (members) encourages (encourage) me to develop myself.

My project manager (members) encourages (encourage) me to develop my skills and abilities.

My project manager (members) encourages (encourage) me to seek out opportunities to learn.

My project manager (members) encourages (encourage) me to seek out educational opportunities.

My project manager (members) encourages (encourage) me to learn by extending myself.

My project manager (members) encourages (encourage) me to learn new things.