

What Makes a Bad Design Project Lead?

An Engineer must have a combined set of managerial skills and technical knowledge to be considered a good lead in a design project.

A person with the following qualities could be considered a bad lead:

1. He fails to understand which of his responsibilities are critical, and their delay can impact the whole project severely.
2. She is missing the deadlines frequently.
3. He claims that he cannot meet the deadline, yet fails to accurately estimate and report the required resources he needs to meet the current deadline or his proposed reasonable deadline.
4. She cannot shorten tasks in order to tailor them to the pace the project master schedule.
5. He is unwilling to admit that he may need the help of additional engineers, because he perceives it as a failure.
6. She is not aware of her team members' progress or the progress of the project. When she is asked about the progress of a specific task, she doesn't know the answer and refers the asker to the doer of the task.
7. He is not aware of how long it will take his team to complete a certain task.
8. She does not have the skill of managing and delegating tasks to his team members and balancing that with the work he takes on personally.
9. He fails to assign specific tasks to individuals who specialize in the given required skill.
10. She attends all meetings by herself because she believes she is the obvious option, despite the fact that junior engineers may be able to assist her as well as learn to participate in the meetings themselves.
11. He fails to attend meetings in which his presence is critical, and delegates the task to a team member. As a result, follow-up meetings may be required, resulting in wasted time.
12. She fails to alternate specific types of tasks amongst his engineers in order to prevent them from being bored.
13. He declines any requests for additional task completions in order to minimize his work load, OR
14. He accepts all requests for additional tasks even though he (or his chosen team member) is unfit and unqualified.
15. She is not firm in the face of illogical requests. One famous example is pushing back people who ask to complete tasks haphazardly despite the involvement of a potential safety issue.
16. He has a good sense of awareness as to when he needs to be persistent with his decisions and when he should be flexible, OR
17. She is not logical and does not accept that she is wrong at any time. It is difficult for her to understand that there are many different ways of "tackling" and solving a problem.
18. He rejects novel methodology of solving a problem on sight just because he is not familiar with that method.

19. She expects all the engineers under her to follow one her lead unquestioningly, and fails to understand that he is part of a *team* and the final product is the result of a collective effort.
20. He fails to understand not all the technical issues have a *technical* solution; some should be resolved through consensus and some of them should be resolved by an executive decision.
21. She fails to supervise people under her in technical issues. She fails to provide guidelines to team members in order to maximize their efficiency.
22. He doesn't have good technical knowledge related to the project.
23. She is not effectively utilizing the different ways of solving a technical problem: delegating to team members, handling it herself, inviting her team to discuss and solve it as a collective, referring to knowledgeable sources outside of his group/project, contacting an external specialist, such as a SME (Subject Matter Expert).
24. He bring a big group of people (above and under him) to solve every single small problem. By doing this he shows he is not very capable and also ignorant of the value of others' time.
25. She doesn't hold herself accountable to the quality of his deliverables. Accountability would result in her striving and pushing her team members in order to complete the tasks as effectively as possible
26. He is unaware of the expected consultant and client duties: for each task/problem, the consultant needs to generate various options with their pros and cons, and the client can make a decision.
27. She fails to keep an internal/external customer in the loop regarding the generation of documents, regardless of urgency, and chooses instead to "surprise" them with the finished product.
28. He does not recognize when a project is in critical condition, in order to raise a red flag for the other Project engineers/managers and/or the client.
29. She fails to recognize the possibility of providing the client with a rough draft (bootleg copy) to facilitate the next step of the process until the final copy is completed. Conversely, she fails to recognize when this is NOT an option.
30. In the case of a losing a key team member, he doesn't know how to minimize the impact. This can be done by borrowing a high quality person from other groups, tailoring the incomplete task so it can be completed by another engineer, or dividing the task among different engineers.
31. She is not flexible and is unwilling to "lend" an engineer to other teams in the case of emergency.
32. He is prone to micromanagement. He asks subordinates to follow his style of work even in regards to minute, inconsequential details, such as those dependent on personal preference.
33. She is unaware of the consequences of his actions upon other disciplines, and therefore fails to inform/warn them of time-sensitive information. For example, she needs to know the changing of information in the data sheet of equipment during the bidding should be quickly shared with the mechanical/procurement group.

34. He fails to recognize the required accuracy of a deliverable; therefore he can waste man-hours on a task which does not require a lot of detail, or spares too few man-hours on more critical tasks.
35. She prioritizes tasks not based on their time criticality, but on her own enthusiasm and willingness to complete a given task.
36. He constantly complains that he is overwhelmed; while it is reasonable to feel that way occasionally; constant complaints indicate that he is not functioning properly or he needs more human resources in his group.
37. She fails to answer her emails/other correspondents in a timely manner.
38. The amount of time he allots to the reading and approval of a document is a function of how busy he is and not the criticality of the document.
39. She doesn't protect and uphold her group.
40. He fails to accept his (or his group's) mistakes and instead tries to pin them on others.
41. She fails to convey the client requirement to her group. This is more critical for parameters which are not accurately quantified; for example she needs to have some idea about the level of required automation in the plant, the tolerable risk of the client for safety related decisions, the risk taking ability of the client to adopt new systems which the design methodology is not well established, etc.
42. He is unwilling to share what his group has prepared and created with other groups in the same project, even if it improves their efficiency.
43. Instead of solving the problems, she pushes them to an unknown future.
44. He fails to notice the first action after discovery of a big mistake is the effort to minimize the magnitude of mistake and shrinking the extent of it (number of impacted parties) and NOT finding the guilty.

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Toghraei has over 20 years experience in the field of industrial water treatment. His main expertise is in the treatment of wastewater from oil and petrochemical complexes. For the past seven years he has taken on different technical and leadership roles in water treatment areas of SAGD projects. Toghraei has received a B.Sc. in chemical engineering from Isfahan University of Technology and an M.Sc. in environmental engineering from the University of Tehran, and is a member of APEGA.