

A day in the life of a construction site supervisor

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THE SUPERVISOR

The door opens and a troubled man storms out. With big steps and a wrinkle on his forehead, he walks towards the nearly completed building. Everything was arranged for an effective day of work, but the phone would necessarily ring. He knows that this emergency will take at least two hours to resolve, perhaps the rest of the day. He looks at his watch. 12:40. At least lunch was exempt from call-outs. We need to rejoice in the small things in life, he thinks for himself.

He wanders into the great hall and feels how his heart rate increases. He feels angry and agitated as he walks towards the long white wall. Even though he sees it from a distance, the crack looks almost frightening. Someone has ruined a double layer of plaster. Painted and ready. A completed operation. Now a completely new task. While standing there, he comes to think of everything which was scheduled for today. He was going to go through the invoices for the week. Then he had planned to look at the drawings for Phase 2. Work preparations for the installation of the large fans on the 3rd floor would be preplanned at a staff meeting tomorrow. He needs to take note of safety regulations, to review his arrangements for the preplanning and double check that the crane will be available. If only the wind would stop blowing. His mailbox contained some 10 e-mails that need his immediate attention. Everything was arranged for the effective day of work, but no. The phone had to ring.

*He looks at the crack again and takes out a phone from his pocket. It rings twice before he says: "It is bad. I will solve it with Sven and Anders."
He gets an "Okay" in response and ends the call.*

How many supervisors have not been through something like this in his career? Why should anyone take time to plan their work when so much can, and indeed does, go wrong? Why organize when you cannot bring that structure with you to the next project?

It has been clear for some time now that 30-35% of production costs in construction projects do not create any value for the end user¹. Researchers at Chalmers used this knowledge to derive 31 recommendations for improved profitability in the construction industry². One of the recommendations is the *developing similar work procedures*.

The above example gives a glimpse of the supervisor's volatile world. One day is different from the other, plans become obsolete even before they are completed and unforeseen events can upset the most meticulous of plans. The supervisor plays an important part on the construction site. Although the site manager sets up the plans for production, it is the supervisor who creates the preconditions for plans to be turned into reality.

Given that the reduction of waste in production would increase margins in construction projects and in accordance with the recommendations we set ourselves the following question: *What daily and weekly routines of supervisors create good conditions for implementation of the tasks performed by the skilled workforce?*

The prerequisite for the identification and creation of repetitive routines lies in whether it is possible to systematize the construction supervisor's activities in practice. It is therefore necessary to investigate whether supervisors can work systematically every day or not.

¹ Josephson, Saukkoriipi (2005), Slöseri i byggprojekt – Behov av förändrat synsätt, s7

² Josephson, Saukkoriipi (2009), 31 rekommendationer för ökad lönsamhet i byggandet.

The theory we studied in this survey highlights systematization. Toyota Production System, also known as lean, emphasizes that systematic and standardized work allows for continuous improvement. In addition one can create and maintain predictability of the production. Swedish Agency for Public Management released a report in 2009, *Sega gubbar*. The report states that a standardized approach allows for feedback of experience because it is saved in the work method. In the previous report (31 recommendations ...) it is asserted that one can use the hitherto most effective way of working and reduce unnecessary operations. In addition, it is stated that the process becomes more stable.

THE SURVEY

We conducted 57 interviews with supervisors, workers and site managers in 12 different projects managed by the construction companies Skanska and MVB.

THE DEFINITION

Using the results reported in *Figure 1*, we managed to develop a working definition for the supervisor profession that was general for both companies. The question asked was simply: "What does a supervisor do?" The role of the construction site supervisor can be summarized in three areas: Planning, Preparation and Follow-up. All the tasks mentioned in interviews and job descriptions are contained within those areas. The duties and responsibilities of the construction site supervisor are summarized in *Figure 2*.

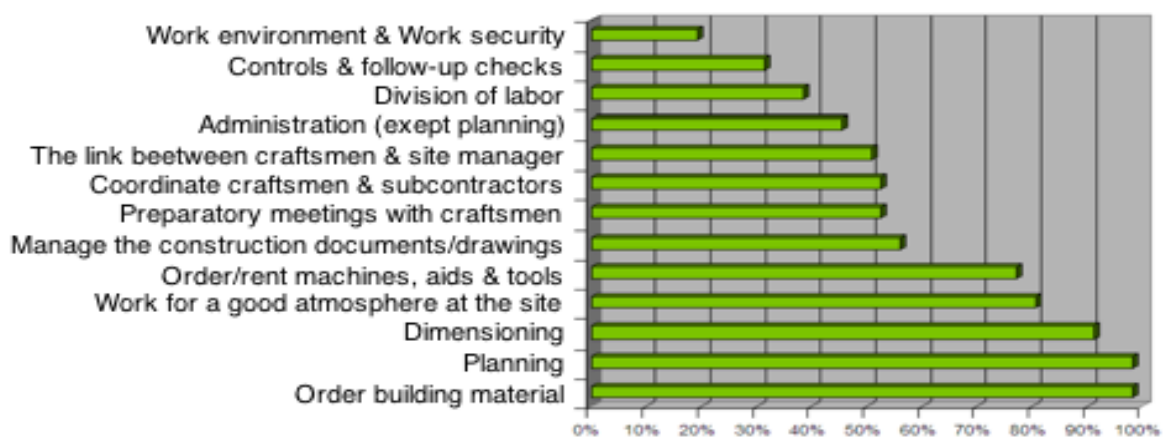


Figure 1. Tasks and responsibilities for supervisors according to the persons interviewed. The x-axis indicates what percentage of the questioned persons that have mentioned that particular task/responsibility.

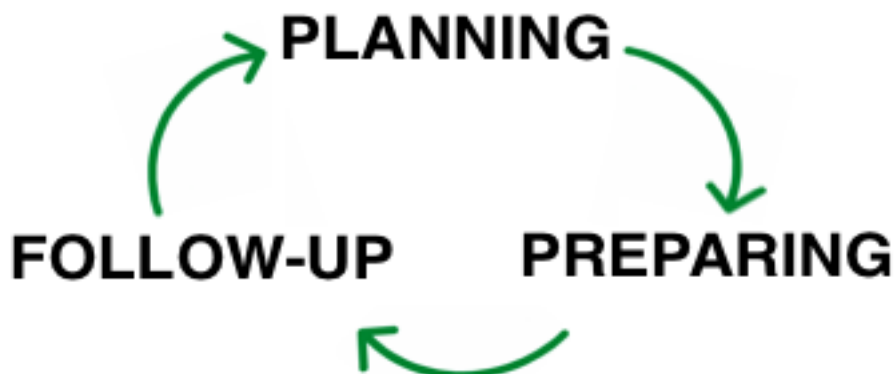


Figure 2. A schematic illustration of the segments that make up the work day of the supervisor.

The supervisors work seems to be cut out rather straightforward for him. Appearances can be deceiving however, as there is a very prominent complexity imbedded into the profession. The main reason for this is that several tasks are taking place simultaneously

and that those tasks are in different phases of this cycle. The complexity emerges when the supervisor must switch between the planning, preparation and follow-up of several tasks in a relatively short time frame.

The major areas are elaborated and clarified with the following components.

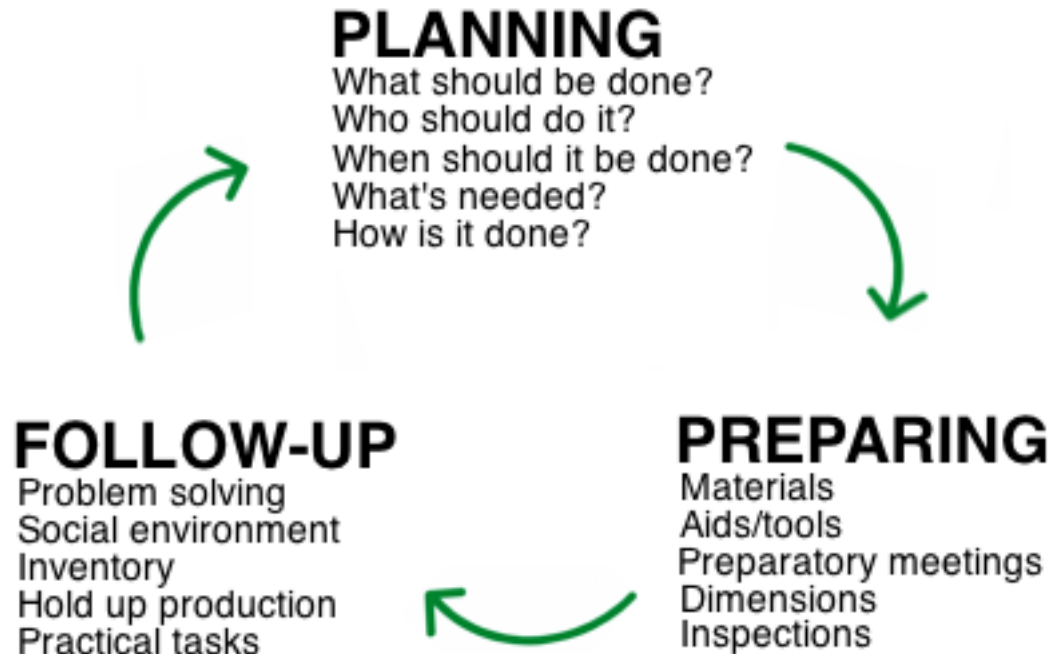


Figure 3. Planning, Preparing and Follow-up, elaborated.

THE INITIATIVE

It is very difficult to deal with the complexity of the construction site. However, one becomes more productive if one doesn't passively accept this fact. The supervisor can and should have a basic structure, an idea, for his work. It is otherwise easy to end up in a situation where the only problems handled are those that appear in front of you. This makes for a reactive supervisor, a supervisor who responds to what is happening. Instead supervisors should be proactive. They should take hold of things before they happen or become urgencies. A production manager put it like this: "I do not think many problems should be solved. I think we should ensure that no problems occur. "

THE WORKING DAY

At this moment in time it is not possible to find a general and precise work schedule, which can be applied every day in all projects. The work day of a supervisor is too complex and projects are exposed to change. Even though this complexity requires the supervisor to be flexible, his work circulates around the same assignments. All tasks performed on the construction site should undergo *Planning*, *Preparation* and *Follow-up* thoroughly. Otherwise the supervisor will not have fulfilled his duties adequately. It is therefore important that the work schedules allow for these steps to be performed by the supervisor. Every supervisor should reflect on his day to day performance. At the same time it is important not to overlook other important commitments. The following items must fit in the supervisor's workday:

- **Morning Round.** Being out on the site at 07:00, visiting all the teams, checking of attendance and any problems encountered.
- **Other rounds on the site.** It is essential that the supervisor keeps abreast of what is happening on the site and is available for the workers. Rounds are also important for the social environment in the workplace.
- **Late afternoon inside the site office.** Adequate time for planning the upcoming day. Moreover, one can use the afternoons for administrative work, such as invoice processing, journal writing, ordering material.
- **Personal planning time.** One should secure time for planning each day. In planning work, one has to stay one step ahead what is happening. A supervisor said: "There is no more work in being ahead of schedule. Getting ahead in the beginning and making sure to hold that advantage makes life easier, it's doesn't mean more work. "
- **Meetings.** Supervisors have a series of meetings which they participate in. It is important that the supervisor is active and involved in these meetings, in order to be able to convey what has been said to his coworkers. Many of these meetings are held on a regular basis throughout the construction time.

No matter how one chooses to structure the work day, one should always be prepared that it can be rebutted by unforeseen events. A production manager said that there may be a danger in constructing detailed work schedules since those seldom can be upheld. He argued that this can create unnecessary stress. Flexibility should be the watchword instead.

We believe that one should have a basic structure for one's work but that one should be prepared to waive that structure. This view was expressed by a production manager. He explained further that a structure is necessary in order for one to get things done and to maintain initiative and avoid a reactive approach.

The following schedule is an example of how a basic structure for the day might look like. Each supervisor should review their own working day. This schedule is meant to be used as a starting point. Remember to be prepared to depart from plans, re-prioritize the tasks and remain flexible.

- 6:30** Arrival, check email, check for revisions or other information, unlock sheds
- 7:00** Morning Round: Visit all the teams at their workstation and check for any encountered problems.
- 9:00** BREAKFAST
- 9:30** Solve problems identified on morning round
Time for planning / meetings
New round with information out to workers
- 12:00** LUNCH
- 12:30** Preparation, follow-up and monitoring of operations in workplaces
- 15:00** Journal writing, review of the upcoming day, ordering of materials, preparations of tasks
- 16:00** Locking up