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# Teleworking: To what extent can it fulfill its promises?

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### Abstract

According to popular statements on the subject, teleworking or telecommuting is supposed to yield a range of advantages to workers, businesses, government and society as a whole. Several advantages named are huge financial savings, much higher productivity, less traffic and cleaner air. Such claims tend to be either highly exaggerated, or simply untrue. Teleworking by certain employees, performing certain tasks, under certain conditions sometimes does result in overall benefit compared to those employees carrying out the same tasks at that same time while not teleworking. However, generalisation of such advantages is inappropriate. Instead, the disadvantages often vastly outweigh the advantages. This may leave teleworking as little more than a fringe benefit to employees at the expense of their employers.

When teleworking, loss of effective productivity and of production quality is often caused by loss of leadership effectiveness. Loss of leadership effectiveness is formed when the physical distance between teleworkers and their colleagues and leaders no longer allows them to communicate with one another as they do when they are physically proximate to one another. This leads to significant decrease in organisational effectiveness, even when teleworkers were to work more and harder than when working at the office. Other presumed advantages too, such as mobility improvements, may be achieved easier by other means.

Still, under strict conditions, teleworking can indeed be advantageous beyond serving merely as a fringe benefit to workers. To be beneficial to employers, or at least to avoid damage to employers, the following conditions must be met:

1. The assigned tasks must be fully suitable for teleworking;
2. The prospective teleworkers' personal circumstances must fully allow executing the assigned tasks while teleworking;
3. The organisational circumstances must fully allow executing the assigned tasks while teleworking;
4. The teleworkers must be fully apt to perform the assigned tasks while teleworking;
5. The supervisors must be fully apt at supervising these specific teleworkers while they perform those tasks under the given circumstances.

Teleworking's range of applicability is determined by these five confines. Since tasks and circumstances are subject to change, the specific aptitude of teleworkers and their supervisors

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is also subjected to those changes. However, three global categories of applicability can be identified:

1. Innate teleworking: Work is carried out naturally at a physical distance from the base office, such as is the case for field workers;
2. Attainable teleworking; Work may be carried out while teleworking, provided this is done within its range of applicability, for instance drawing up or studying certain papers;
3. Inapposite teleworking: All cases in which no combination of variables lead to successful application of teleworking. For certain types of tasks, this is always the case, such as for a receptionist or warder.

Inapposite teleworking is counter effective and thus damaging. Inapposite teleworking must be avoided. From a case to case basis it is to be determined whether teleworking is attainable or inapposite. Unlike for innate teleworking, for attainable teleworking it is ill-advised to allow employees to telework for a fixed percentage of their contract hours because the conditions that determine the range of applicability are constantly subject to change, and changes can easily render teleworking inapposite. At one moment all conditions can be met making teleworking attainable, after which a change in task or circumstances may easily render teleworking for the same employee inapposite.

## **1. Introduction**

Those who work at an office and need to study a document well, may sometimes find it hard to get away from all sorts of distraction. This may lead some organisation members to take the papers home to study those papers. In this document focus will be on whether teleworking truly is a solution to one or more problems, or that it rather promotes (the continued existence of) problems.

It is quite understandable that some find it appealing to be employed without having to go to work, without needing to line up to traffic jams, to stand waiting on windy railway platforms, or simply without travelling in time that could have been spent on extra night's rest, on bringing the children to school, or simply on something else. In the past, when it was more usual (and more often mandatory) for employees to live within just a few miles radius of their employer, this seemed to be much less problematic. Now, every day tens of thousands commuters travel from cities to work elsewhere and tens of thousands commuters enter into those very same cities to work there. Perhaps this document can make some contribution to such matters not being addressed with new problems. To a significant extent, this document is based on part of the findings of independent research, carried out by us in 2011. Teleworking and virtual leadership were some of the research subjects (see 3. The Research). After a few explanatory remarks about concepts used in this document, the research will be briefly explained, prior to mentioning various findings. In closing, some important conclusions are mentioned and several relevant recommendations are made.<sup>2</sup>

## **2. Concepts**

Organisational effectiveness is the extent to which an organisation produces what it is constructed to produce. An organisation that produces little, compared to its theoretical production capacity, is an ineffective organisation. An organisation that produces much, but not what it is constructed for, is also an ineffective organisation. Productivity says little about

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<sup>2</sup> The information in this document, including the recommendations, is selected and summarised and serves as a guide line only. No claim is made for this document to be exhaustive or to be applicable for any specific purpose. In specific cases, one should always consult an expert.

effective productivity or about organisational effectiveness. In theory, what an organisation is constructed to produce must reflect on its organisational goals. Even if that would always be so in practice, Simon (1945: 257-278) suspected that individuals within organisations rarely have a common understanding of goals. Apparently, 78% of organisation members either do not know what the organisations' goals are, or they do not care, and they just "do their thing" (Covey, 1989). Therefore, chances are high that organisations (also) produce matters other than those for which those organisations are constructed. This is especially damaging to society if those organisations are part of the public or subsidised sector. After all, tax payers bear the costs for workers within those sectors regardless of whether those workers do what they should do. When they are engaged in other activities, tax payers pay even more, since the 'real' work still needs to be done, perhaps even by additional civil servants and subsidised employees.

Virtual leadership takes place when leaders and their followers physically work at a distance from each other and they exchange information via telecommunication means. Leaders are not physically present at the followers' place of work, but they are virtually present, by means of technological aids. As such, virtual leadership is by no means new. For instance: sales agents, taxi drivers and patrolling police officers hardly ever work in the company of their bosses. Virtual leadership fits the nature of such jobs well, mainly because the nature of the job, combined with workers' competence, allow those workers to operate autonomously. Generally speaking, such workers know exactly what is expected of them and they are quite capable of meeting those expectations without much direct involvement of their leaders 'in the field'. I refer to such forms of teleworking as *innate teleworking* with *innate virtual leadership* as its leadership component. Relatively new is the development of teams in which not only leaders and followers are physically separated from one another, but team members, working on the same task as well. This occurs, for instance, in international teams with geographically dispersed team members, or teleworkers, working from home or at telecentres. Even though such team members are not (always) physically proximate to one another, they are virtually teamed up to one another by task interdependence and shared leadership. Concern is caused more by leading such virtual teams than by innate virtual leadership. When communication amongst such team members and between those members and their leaders takes place via technological means such as computers, one tends to speak of virtual work environments: the workers do not physically share a room, but they do tend to technologically share room, e.g. on a computer server to exchange messages or files. The virtual aspect of such environments exists in various degrees, ranging from a telecommuter predominantly working off-line at home and occasionally linking up to the company's computer system to exchange files or information, to teleworking in a fully computerised environment where organisation members, as avatars,<sup>3</sup> meet in custom-designed conference rooms, complete with nifty white boards, slide show screens, period paintings, requisite plans and other computerised artefacts (Read and Reeves, 2009).

### **3. Range of applicability**

Indiscriminately granting employees the right to telework as a fringe benefit is bound to result in more disadvantages than advantages. To organisations, teleworking can only yield advantages if it is carried out within its range of applicability. Teleworking's range of applicability is determined by the following conditions:

1. The assigned tasks must be fully suitable for teleworking;

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<sup>3</sup> Avatar = a computerised image representing a computer user, either selected, created or adapted by the user.

2. The prospective teleworkers' personal circumstances must fully allow executing the assigned tasks while teleworking;
3. The organisational circumstances must fully allow executing the assigned tasks while teleworking;
4. The teleworkers must be fully apt to perform the assigned tasks while teleworking;
5. The supervisors must be fully apt at supervising these specific teleworkers while they perform those tasks under the given circumstances.

If these conditions are not all simultaneously met sufficiently at all times, teleworking is carried out outside its range of applicability, at the expense of the effectiveness of the organisation. Organisational circumstances include available, suitable technical means and adequate connection to other organisational processes and to relevant non-teleworkers. Teleworkers' aptitude and supervisors' aptitude include relevant knowledge and skills in utilising available technical means, but also the self discipline and professionalism demanded by teleworking. Personal circumstances include both access to a suitable tele-workplace (usually at home) and the absence of distraction. To determine the suitability of tasks for teleworking one should include examining matters such as dependence on specific means, on localised information, on leaders, on colleagues and on third parties.

Three global applicability categories can be identified:

1. Innate teleworking: Work is naturally carried out at a physical distance from the base office, such as by field workers;
2. Attainable teleworking: Work may be carried out while teleworking, provided this is done within its range of applicability, for instance drawing up or studying certain papers;
3. Inapposite teleworking: All cases in which no combination of variables lead to successful application of teleworking. For certain types of tasks, this is always the case, such as for a receptionist or warder.

One can only rationally discuss (expanding) *attainable* teleworking. Determining whether teleworking is attainable or inapposite can only be done case to case. Since conditions are constantly subject to change, new determination is required after each change in task, circumstance or relevant aptitude.

#### **4. The research**

In 2011 we conducted independent research primarily on the extent to which virtual leaders can contribute to the effectiveness of organisations. Several subjects within that research were virtual leadership, teleworking, virtual environments, organisational effectiveness and the connection between human beings and their technical and socio-organisational labour environment. The research consisted of a literature study, document analysis, interviews and questionnaires (data triangulation). Participants in the quantitative research were members of the Dutch Provincial Councils of Zeeland and Noord-Brabant, as well as members of the Leeds city council administration in the United Kingdom. During the qualitative research data is utilised with regard to a broad range of local, regional and national public sector organisations, mainly in The Netherlands and the United Kingdom. The research's unit of analysis was the relationship between operational leaders (supervisors) and teleworkers, from the viewpoint of teleworkers, as well as of their supervisors and their managers (theory triangulation). Findings from qualitative analysis are compared to those from quantitative analysis (method triangulation). With this research method the same matter is studied from various angles. This document relates to a selection of the full research, focused mainly on teleworking.

## 5. Findings

There is a high risk that teleworking is, and will be, carried out beyond its range of applicability. This is almost certainly the case when teleworking is implemented quite indiscriminately without proper verification of appropriateness for this method of tasks, workers or means. Of course, the status of inapposite teleworking will not change if, after examination or experience has made its unsuitability apparent, no adequate action is taken in response to this establishment.

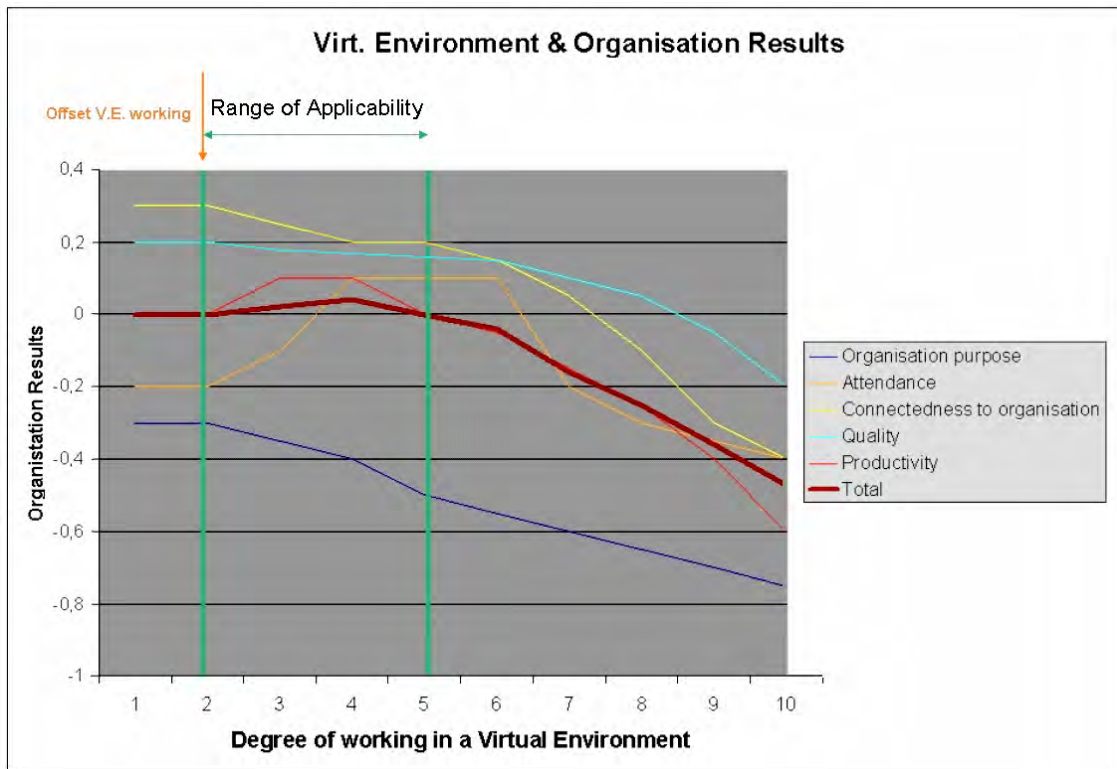


Figure 1

The physical distance between teleworkers and their colleagues and supervisors no longer allows them to communicate with one another as they would be able to if they were physically proximate to one another, significantly impeding supervisors to supervise. This leads e.g. to decreased leadership effectiveness causing teleworkers to increasingly stray from original goals and feeling less supported in their work by their supervisors. A decreased sense of connectedness to their colleagues, to their supervisors and to the organisation, negatively affects their emotions and mood, increasing the risk of absenteeism.<sup>4</sup> Decreased leadership effectiveness, relatively inadequate technical means and/or insufficient aptitude required to utilise those means, negatively affect the productivity and quality of teleworkers' performance. These effects combined lead to decreased organisational effectiveness when teleworking is done beyond its range of applicability. Such a decrease then takes place even if teleworkers work harder and more than when they would, when working 'regularly' at the office. Based on qualitative research findings, in figure 1 a general indication is given of the underlying mechanics of attainable teleworking during and after transferring from a face-to-face environment to a virtual environment.

<sup>4</sup> Immediately after employees are allowed to telework, during a short period of time, absenteeism tends to decrease a little. After that period the percentage of absenteeism tends to increase.

### 5.1 The appeal of teleworking

As mentioned earlier in this document, *in theory* there are some appealing advantages to teleworking. Organisational members at different levels tend to view this matter differently. For instance, managers tend to approach teleworking more businesslike than other organisation members, wanting more assurance that applying teleworking will yield the organisation more benefit than burden. It is often reported that teleworking appeals to workers because it gives them more opportunity to balance work with their personal affairs. However, quantitative findings show that teleworking appeals more to workers whose balance of work and private life is better than to workers for whom these elements are less balanced. Conversely: when the balance of work and private life is worse, the appeal of teleworking is less. Even though only a minority of all respondents expressed that *the goal justifies all means*, compared to those to whom teleworking appeals little, this factor is tripled for respondents to whom teleworking has a strong appeal (Figure 2).

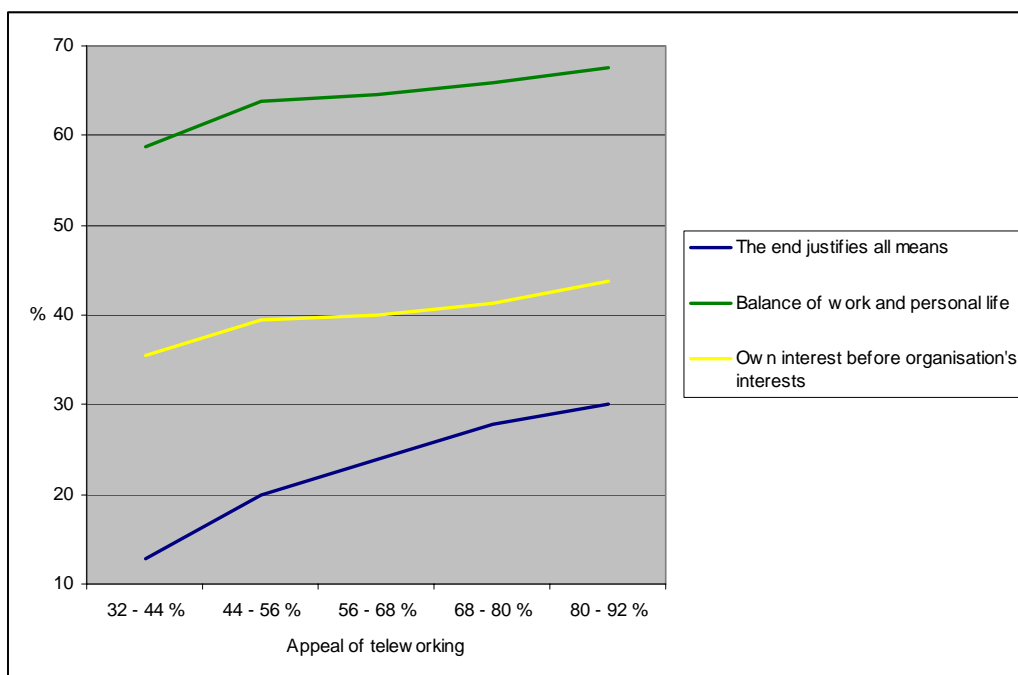


Figure 2

- Managers' appeal of teleworking correlates positively with their belief that the applied technology is more available and more suitable for what needs to be done. This correlation is not found in non-managerial or supervisory staff;
- Unlike respondents of other organisational levels, to managers, teleworking has a stronger appeal as their personal circumstances improve;
- When teleworking appeals more to managers, they tend to see a higher outcome potential, whereas supervisors associate this with a lower outcome potential;
- Teleworking appeals more to managers when they perceive outcomes as being higher, contrary to non-managers and supervisors to whom teleworking appeal correlates with their perception of poorer outcomes;
- Faced with longer distances to commute, to non-managerial members, the appeal of teleworking is stronger, whereas with managers, increase in distance to commute is associated with weakening of this appeal;

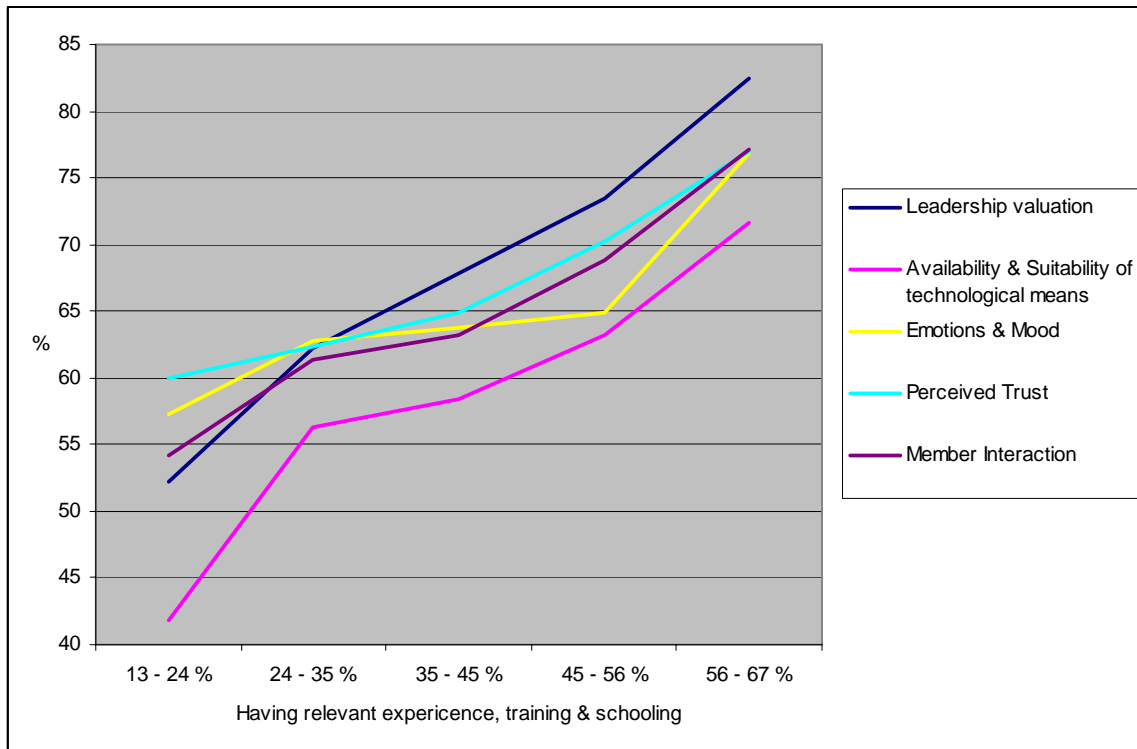
- With managers and non-managers, an increase in the appeal of teleworking correlates positively with fitting aptitude and experience, but with supervisors there is a tendency to the opposite.

## 5.2 Dependencies

Some dependencies related to teleworking are:

- Relevant knowledge and skills;
- Appropriate and available technical means;
- Appropriate supervision and guidance.

Correlation of those elements becomes apparent from figure 3.



**Figure 3**

Comparison of Figure 3 to Figure 4 raises the idea that appropriate aptitude has more positive influence on perceiving to have suitable technological means available than actually having such means available.

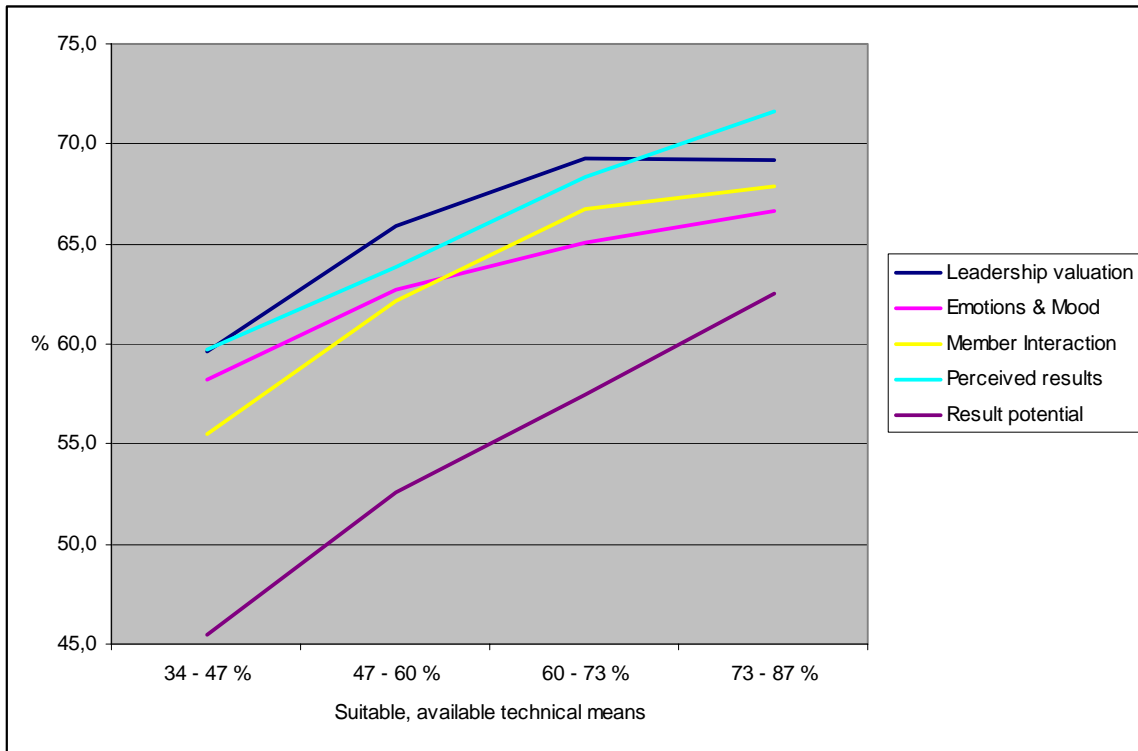
## 5.3 Consequences of teleworking<sup>5</sup>

As organisation members telework a larger percentage of their contract hours they ...

- Feel they are more dependent on leadership;
- Increasingly feel not to have all the technical means they need at their disposal;
- Consider their interaction with their colleagues and supervisors as being more formal;
- Feel less connected to the organisation.

Two of the elements shown in the graph in Figure 5 are an increase in absenteeism when teleworking more often, and a decreasing sense that work contributes to the worker's joy in life, when teleworking more often.

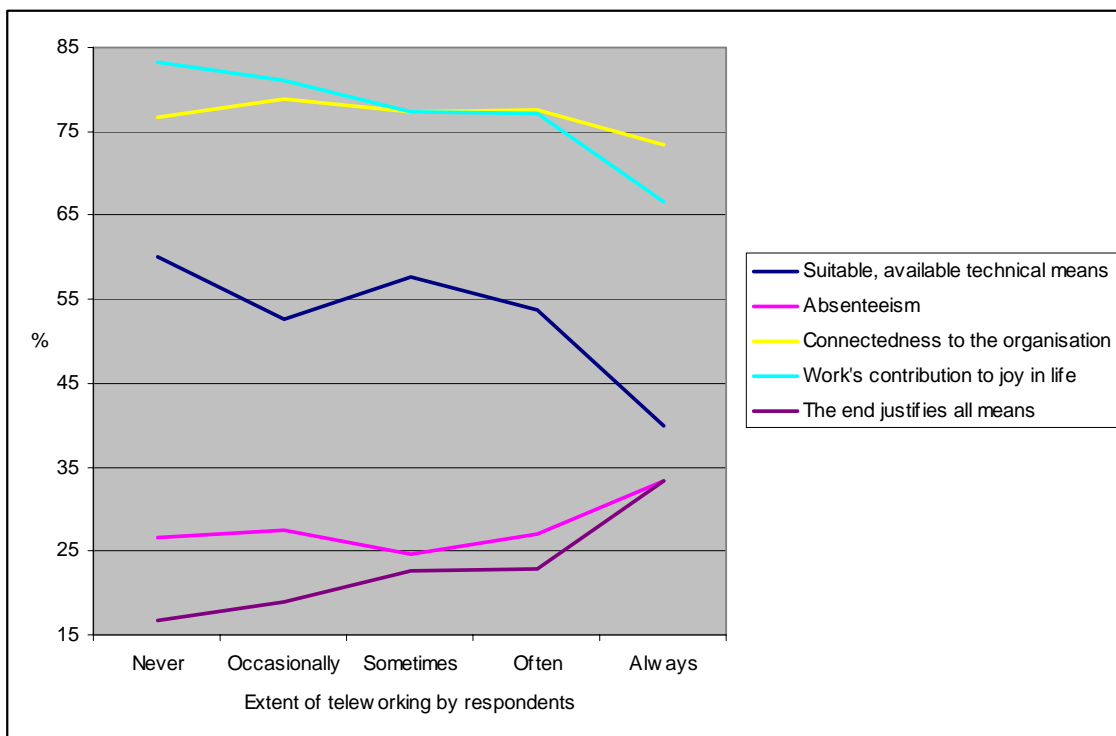
<sup>5</sup> From the quantitative research (figures 2 - 7) correlations are derived between the components mentioned. The causal relationships are derived from the qualitative research.



**Figure 4**

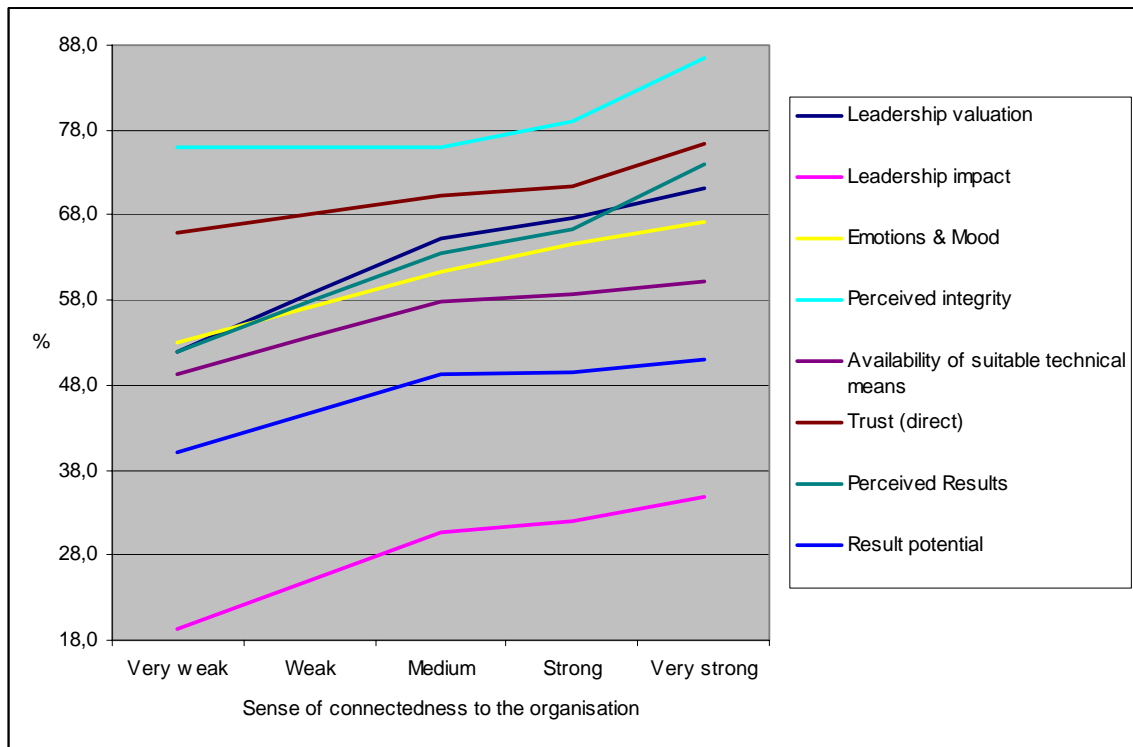
**5.4 The importance of connectedness to the organisation.**

Figure 5 shows a relatively small decrease in the sense of connectedness to the organisation. In this regard it is noteworthy that many of the respondents had started teleworking not long before the survey was made. Further research has shown that this sense of connectedness tends to decrease further as time passes. The graph in figure 6 gives an impression of the importance of employees feeling connected to the organisation.





**Figure 5**



**Figure 6<sup>6</sup>**

### 5.5 Observations by level

As mentioned in 5.2, organisation members at different organisational levels view and experience teleworking and related aspects differently. In Table 1 several additional differences are mentioned with regard to the agreement, in terms of percentages, of organisation members at non-managerial- (N), supervisory- (S) and management level (M), with several propositions.

Selection of propositions	N%	S%	M%
Without supervision many workers within our organisations cannot carry out their work.	43,6	60,0	66,7
Supervisors usually succeed in removing obstacles for their subordinates.	72,9	78,9	77,8
Better results would not be achieved if supervisors would spend their time differently	65,0	65,6	60,0
Subordinates always know exactly what supervisors expect from them.	71,2	70,0	44,4
All supervisors always perform optimally. Additional experience, training or schooling would not change that.	62,8	51,1	40,0
Our organisation members always exactly know the formal organisational goals, and they never engage in unrelated activities.	76,3	61,1	68,9

**Table 1**

<sup>6</sup> With the graphs in figures 2 – 7 of this document ascertained correlations are visualised, without assuming causality. For example: no claim is made that a higher valuation of leadership is caused by an increased sense of connectedness to the organisation. It is merely established that both facts exist simultaneously. (Value of ‘weak’ obtained by interpolation)

### 5.6 Leadership and formal communication

Formal communication is relevant communication. To an organisation this equals effective communication. More than organisation members at higher organisational levels, non-managerial workers appear to find it difficult, and are sometimes reluctant, to communicate formally. After all, to many, being able to socialise is an important reason, if not the main reason, to get or to keep a job. The graph in figure 7 is based on response of mainly non-managerial organisation members spending part of their contract hours teleworking.

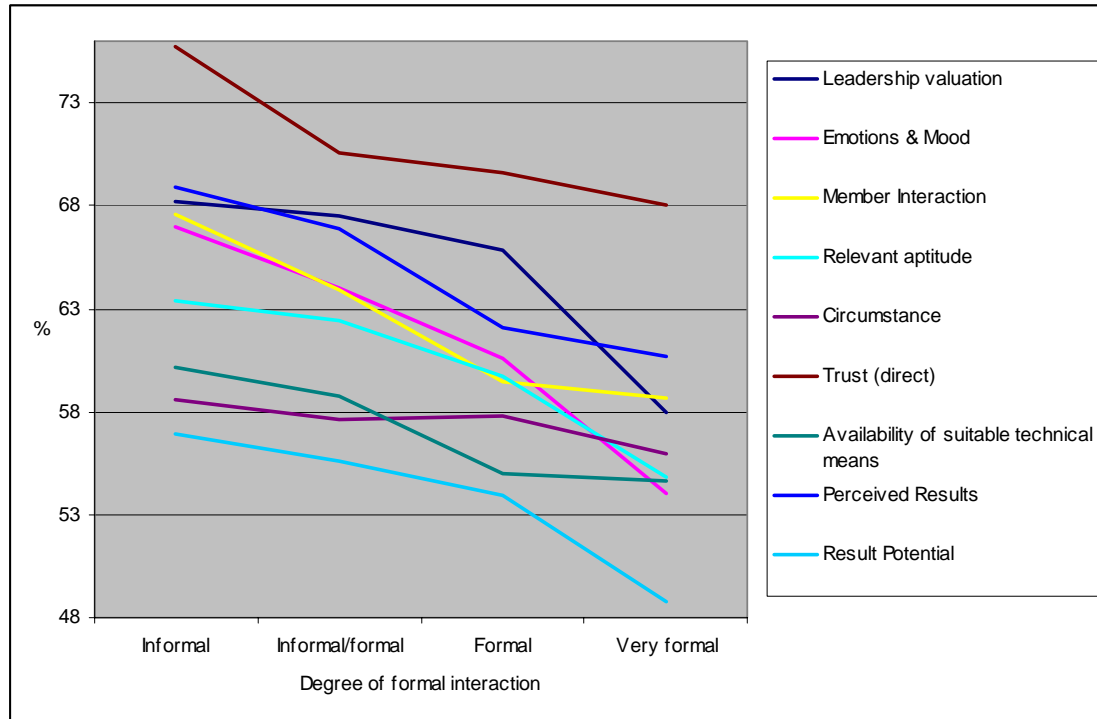


Figure 7<sup>7</sup>

Quantitative research has shown significant differences in how formal interaction is regarded by managers, non-managerial workers and their supervisors. Leadership too is looked upon differently at different organisational levels.

- With supervisors and their followers, leadership value correlates positively with leadership impact, whereas to managers leadership value seems to have no relation with leadership impact;
- Managers and non-managerial workers correlate leadership value positively with organisational circumstance. This correlation is not found in supervisors;
- With non-managerial workers, the degree of formal interaction correlates negatively with leadership value, while this correlation is positive in managers;
- Supervisors and their followers correlate formal interaction negatively with organisational circumstance. The opposite is the case for managers;
- When interaction is more formal, non-managerial staff tends to trust others less. This correlation is less significant in supervisors, and in managers this correlation is not significantly present;

<sup>7</sup> Obviously a worker will not all of a sudden have less suitable technical means available as soon as he or she will communicate more formally. The graphs of figures 2 – 7 display values perceived by respondents. Respondents who experience interaction to be more formal, tend to perceive having less suitable technical means available and vice versa.

- General circumstance, outcomes potential and perceived outcomes all correlate positively with formal interaction in managers, whereas they tend to correlate negatively in supervisors and their followers;
- In managers, the distance to commute correlates negatively with formal interaction. In supervisors and their followers, this correlation tends to the opposite.

### **5.7 Effectiveness**

Effectiveness can be regarded as the extent to which something is useful. Anyone can work enormously hard with the very best of intentions, but if all efforts are directed towards something other than the initial goal, those efforts, with regard to that goal, are useless. Contentions that teleworking is guaranteed to cause higher productivity tend to be based on (vague) assumptions and not on empirical evidence. The validity of claims to the contrary is easier to establish. One of the consequences of this at a macro level is that financial advantages of nonexistent productivity gains are also nonexistent and in all probability will appear to be significant financial losses. At a micro level teleworking can have advantages: in some cases, certain workers really can carry out certain tasks better at home than at the office, for instance because there is too much distraction and interruption at the office workplace. However, making office workplaces less susceptible to interference, for instance by improving work discipline and by making more effective use of designated ‘quiet rooms’, would benefit more people than just those who telework for that reason.

### **5.8 Efficiency**

Efficiency without effectiveness is pointless. A postman who efficiently destroys postal items instead of delivering them to the addressees does his work just as badly as a teleworker that efficiently does other things than contribute to bringing forth what the organisation is constructed for. Improving effectiveness often appears to be a very sound method to improve efficiency. Claims that teleworking offers huge efficiency advantages tend to be highly speculative. In many cases they are based on non-empirical assumptions or on parroting assumptions of others. In other cases efficiency improvements are made in certain areas, but those are annulled, or have even been exceeded by efficiency deterioration in other areas. It is, for example, quite obvious that savings on the number of office workplaces will by far be exceeded by additional costs for new means and workplaces at the homes of workers and in telecentres, which all need to be procured, created, maintained and supported.

### **5.9 Mobility and flexibility**

In scientific literature, the proposition that teleworking will lead to significant reduction of motor vehicle traffic has been contradicted by some, and strongly nuanced by others. Organisation members that do not enter into traffic to travel to and from work, do tend to participate in traffic and thus contribute to traffic volume. When teleworkers do not participate in traffic, others may use the motor vehicle that has become available, instead of using public transportation. Furthermore, teleworking lowers the threshold to live at a greater distance from employers, resulting in longer traffic participation when employees do not telework. Reduction of traffic density and of environmental pollution may be achieved easier and more effectively by increasing shift work. Should civil servants work in full shifts, society might profit significantly from advantages ranging from savings on government buildings to dramatic reduction of execution time of public sector processes.<sup>8</sup> Just as is the

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<sup>8</sup> An organisation with 168 weekly working hours available clearly can make more efficient use of its resources such as workplaces and offices than an organisation with just 36 weekly available working hours can. In the public sector, that might lead to almost 80% of all public sector buildings and other means becoming redundant. In theory this is a simple measure, which in practice can lead to enormous cost savings.

case for teleworking, the nature of certain tasks and personal circumstances will not allow every organisation member to work in shifts. However, working in shifts can contribute to balancing work and private life, for instance by enabling organisation members to make and meet personal appointments during the day, without having to take time off from work.

## **6. Conclusions**

Managers tend to use the time needed to gather information about advantages and disadvantages of teleworking before deciding whether to implement it into the organisation or into their department. Once they have decided to do so, chances are high that this is implemented too randomly, preventing proper exploitation of teleworking's potential. Teleworking's positive potential is different in nature and has weaker social impact than common belief tends to suggest. The risk of applying teleworking inappositely is high. Inapposite teleworking is counter effective and therefore harmful to both the employing organisation and to all its stakeholders, including its employees.

## **7. Recommendations**

With respect to this document's subject, the most important recommendation is not to apply teleworking inappositely. It is highly recommendable to strictly mind teleworking's range of applicability. Since the confining elements of attainable teleworking are very dynamic by nature, a new assessment of the applicability of teleworking must be made after each change in:

- Tasks;
- Employees' personal circumstances;
- Organisational circumstances;
- Employees' relevant aptitude, given the (altered) tasks and circumstances;
- Supervisors' relevant aptitude, given the (altered) tasks and circumstances.

For this reason, unlike with innate teleworking, it is ill-advised to apply attainable teleworking for a fixed amount of organisation members' contract hours.

Professionals do not mind work resembling work. Where employees regard formal communication as part of their work as unpleasant, exchanging some of their working hours for informal meetings is no solution, not even when such meetings take place virtually via social media.<sup>9</sup> Doing so would only lead to further reduction of productive labour hours and further costs increase. Subsequently those particular employees will still regard formal communication as part of their work as unpleasant, and perhaps even more so, finding that the people they enjoyed having a drink with, chatted with or 'twittered' with earlier, now went back to dull conversations about work. Team building can make valuable contributions to business processes and subsequently to organisational results. The extent to which that potential will be utilised will, to a high degree, be determined by what bonds team members. To an organisation, placing emphasis on social ties will have different results than emphasis on professional ties between team members. In this, there lies a basic responsibility for administrators, managers and supervisors. When they place emphasis on strong social ties between team members, personal – to the organisation irrelevant – interaction will tie team members to one another. Placing emphasis on strong professional ties will tie team members to one another by means of their individual roles in achieving intended organisational results. In this regard, for teleworkers and their supervisors, professional activities seem much more

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<sup>9</sup> Social media *can* be utilised for relevant communication.

valuable than social activities. Through professionalisation, teleworking's range of applicability can be broadened allowing it to be applied effectively and efficiently more often.

With regard to teleworking, enhancing relevant aptitude of non-managerial staff and their supervisors by means of training, schooling and guidance, will lead to further broadening of teleworking's range of applicability. This refers to specific activities, aimed at meeting deficiencies in *relevant* knowledge and aptitude. It is well-advised to include in this also the organisation members who do not telework themselves, but who are affected by teleworking, for instance because they work with teleworkers and use specific technical means to do so. Timely assessment of the results of such activities, and promptly taking appropriate action in response to those results, reduces the risk of inapposite teleworking. When the activities have not (fully) led to meeting the deficiencies, teleworking is evidently inapposite. In any case, but with regard to teleworkers perhaps more than for other organisation members, it is well-advised to carry out all assessments on time and to promptly and adequately react to the outcomes. Teleworkers need more short-term leadership and supervision than other workers do, to compensate the loss of leadership effectiveness caused by teleworking, as well as to allow responding timely to changes in the confines of teleworking's range of applicability. Setting long-term goals without phasing them into assessable short-term parts, will result in being constantly overtaken by (often unpleasant) events.

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