“WorkAnywhere”

Utilizing mobile and flexible work to avoid peak traffic periods: Results of a field study with two Swiss companies

Dr. Johann Weichbrodt
Prof. Dr. Hartmut Schulze
Institute for Research and Development of Collaborative Processes ifk
University of Applied Sciences and Arts Northwestern Switzerland

Switzerland: Public Transport at full capacity

Switzerland won the World Cup…

… of travelling by train:
2'274 km per Person in 2012, highest worldwide

• SBB, Switzerland’s Federal Railways, are transporting half of their passengers in only a quarter of the time

• Can commuters use mobile and flexible work to avoid the peak traffic periods?
**Research Design**

**PROCEDURE**
- 260 employees from two companies
- Research period: two months in early 2013
- Assignment:
  use work flexibility to try to travel outside of peak times whenever possible (7:00 to 8:30 am and 5:00 to 6:30 pm)

**DATA COLLECTION**
- Pre- and post-survey (experience with flex work; productivity; work satisfaction; life balance; …)
- Daily entries in an online mobility journal (times travelled and places used for work)
- Additional qualitative interviews and group discussions

---

**Sample: N = 228 Completes**

Conditions for participation:
- Commuting time of at least 20 minutes (one way)
- Supervisor’s approval

<table>
<thead>
<tr>
<th></th>
<th>Swisscom</th>
<th>SBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>84%</td>
<td>16%</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>living with kids</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>living without kids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no leadership position</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>leadership position</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

average working hours per week: 44 h
average commute (one journey): 64 minutes, mostly by train
Successful avoidance of peak travel periods (PTP)

PTP = 7.00 am to 8:30 am and 5:00 pm to 6:30 pm

<table>
<thead>
<tr>
<th>of appr. 9'500 documented workdays</th>
<th>17%</th>
<th>29%</th>
<th>32%</th>
<th>22%</th>
</tr>
</thead>
</table>

- all day working from home (no commute)
- both journeys outside of PTP
- one journey outside of PTP
- both journeys within PTP

62% of all journeys either not taken or not during PTP ("base rate" = 25%)

Participants were extraordinarily successful in avoiding the peak travel periods.

How did they do it?
Distribution of work hours across different places

- Usual place at company: 62% before the trial period, 54% during the trial period, 8% Swiss average employee (comparison)
- Other place at company: 12% before the trial period, 11% during the trial period
- At home: 21% before the trial period
- En route: 9% before the trial period, 11% during the trial period
- Other place (e.g., customer's): 3% before the trial period, 3% during the trial period, 8% Swiss average employee (comparison)

How many places of work during one day?

- Only at company: 34% of approximately 9'500 documented workdays
- At company and en route: 23%
- At company, at home and en route: 16%
- Only at home: 17%
- At company and at home: 10%
Significant increase in satisfaction with work mobility

"Overall, I am very satisfied with the distribution of my work hours across different places (at home, en route and at my company)."

Scale of 1 “completely disagree” to 5 “completely agree”.

What were the effects of this high level of work mobility on performance and work satisfaction?

Work performance

- about 40% assessed their work output as greater and better
- almost none reported a decrease in productivity
- hours worked per week stayed the same at 44 h
Work performance: supervisors’ assessment

22 out of 44 leaders rated the performance increase of their direct reports about the same as in the self assessment.

--

Satisfaction and well-being

"During the trial period, my ...

- overall work satisfaction: 40% decreased significantly, 38% decreased a little, 20% stayed the same
- personal well-being: 37% decreased significantly, 42% decreased a little, 17% stayed the same
- satisfaction with relationship, family and social life: 58% decreased significantly, 31% decreased a little, 9% stayed the same
- satisfaction with my employer: 51% decreased significantly, 37% decreased a little, 12% stayed the same

More than half of the participants reported an increase in satisfaction, almost none a decrease. No significant differences among age, gender or family status.
Life-Balance

8-item-scale measuring life-balance
1 = problematic
5 = good
difference is not significant

Item with the most problematic results: “I find it difficult not to think about work issues when I’m not working.”
8% “completely agree” and 24% “tend to agree”
mean values: 3.11 (before) and 3.10 (after)

Summary of results

- extraordinary success in avoiding peak travel periods
- with slightly positive effects on work performance and satisfaction
- no other negative effects
- but: near optimal conditions in regard to prior experience with flexible work and support by supervisor & company
- and: high number of work hours per week;
slight problem with “switching off” from work

What could be the potential for reducing peak travel in Switzerland?
Potential for reducing peak travel in Switzerland

<table>
<thead>
<tr>
<th></th>
<th>scenario 1 (optimistic)</th>
<th>scenario 2 (conservative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>additional avoidance of PTP</td>
<td>37%</td>
<td>20%</td>
</tr>
<tr>
<td>(base rate = 25%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>avoidance potential in number</td>
<td>71,900</td>
<td>25,900</td>
</tr>
<tr>
<td>of person-commutes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>effective reduction of</td>
<td>-13%</td>
<td>-7%</td>
</tr>
<tr>
<td>person-commutes outside of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If all Swiss employees who can and want to work flexible (ca. 33%)…
… would avoid the PTP as during the trial period → 13% reduction
… would avoid two additional PTP journeys per week → 7% reduction

A noticeable reduction in commutes during the peak hours of up to 10 per cent should be possible, given a wide spread of flexible work practices.

Discussion

Limitations:
• ideal conditions: high experience, supportive culture,
• only self-reports
• mainly single-item measurements

Implications:
• flexible and mobile work can contribute significantly
to leveling peak traffic periods
• adverse effects should not be expected
• but: certain conditions necessary (especially supportive culture)
Thank you for your attention!

### Team effects
- no change in team performance, team cohesion, or team climate
- almost no acceptance problems reported

> “Flexible work and traveling outside the PTP was accepted by colleagues not participating in the study.”

<table>
<thead>
<tr>
<th>Completely Disagree</th>
<th>Tend to Disagree</th>
<th>Neither/Nor</th>
<th>Tend to Agree</th>
<th>Completely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>4%</td>
<td>17%</td>
<td>36%</td>
<td>42%</td>
</tr>
</tbody>
</table>