**Electronic Supplementary Material for** 

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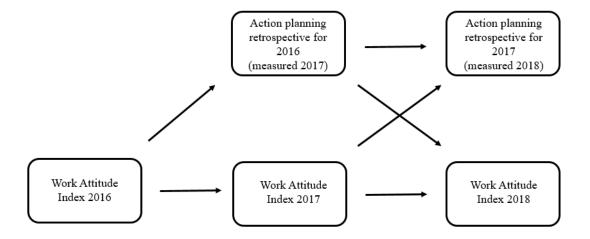
# **Additional Analyses**

### **Reverse Causal Effects**

# Statistical Analyses

To examine the reverse causal effects of the study variables, we investigated the data with cross-lagged panel regressions (see Figure E2). We regressed action planning retrospective for 2017 (OUs with action plans for any of the 22 items of survey included for calculation of work attitude index coded as 1 [n = 515]) on work attitude index 2017, while controlling for action planning retrospective for 2016 (OUs with action plans for any of the 22 items of survey included for calculation of work attitude index coded as 1 [n = 721]). Furthermore, we regressed work attitude index 2018 on action planning retrospective for 2016, while controlling for work attitude index 2017.

**Figure E2**Cross-lagged panel relationships between study variables



### Results

Regressing action planning retrospective for 2017 on work attitude index 2017, while controlling for action planning retrospective for 2016, resulted in a significant unconditional model, suggesting that there was significant variation in the intercepts across the groups; B = -1.61, SE = .05, Wald = 1112.28, Exp[B] = 0.20, p < .001. Consequently, adding predictors to the model could help explain the variation, and we fitted a two-predictor logistic model to the data. Work attitude index 2017 did not predict action planning in 2017, B = -0.14, SE = .13, Wald = 1.17, Exp[B] = 0.87, 95%CI [0.68, 1.12], p = .279, whereas action planning in 2016 did, B = 1.38, SE = .10, Wald = 183.23, Exp[B] = 3.97, 95%CI [3.25, 4.85], p < .001. Having logged action plans in 2016 for any of the 22 items of the survey that are used to calculate the work attitude index made it 3.97 times more likely that action plans were logged again in an OU in 2017.

Regressing work attitude index 2018 on action planning retrospective for 2016, while controlling for work attitude index 2017, showed that action planning retrospectively for 2016 did not predict work attitude index 2018, B = 0.00, 95%CI [-0.02, 0.03], SE = .01, p = .860, whereas work attitude index 2017 did, B = 0.69, 95%CI [0.66, 0.72], SE = .01, p < .001.

#### Discussion

The results suggest that the work attitude index 2017 did not predict whether a group conducted action planning in 2017. The employee survey results of this organization represent the ratings of a variety of different departments and OUs. What constitutes a low attitude index in some areas, might constitute a high index in others. Hence, it is possible that action planning could be done in some areas based on a low work attitude index, but would be judged as not necessary by other areas. There might be other variables that have more

influence on a manager's and OU's decision to develop action plans. For example, action planning in the past predicted whether action planning was conducted again the following year (see also the results of Hypothesis 3 in main document). It is possible that the improvements gained by action planning lead managers and OUs to repeat the process.

The results also suggest that action planning retrospective for 2016 did not predict work attitude index 2018, but work attitude index 2017 did. This indicates that the employee survey results of an OU do not change rapidly from one year to the next, and that the previous attitude index is a good indicator for the following attitude index. Action planning retrospective for 2016 might have not predicted work attitude index 2018 for similar reasons as described above. What constitutes a low attitude index in some areas, might constitute a high index in others. Hence, action planning overall will not predict the value of the attitude index, but as the group comparisons of the main analyses in the manuscript show, groups with action plans showed changes on their attitude index scores.

These results stand in contrast to the results of the group comparisons (main analyses), because those showed, that most groups with action plans improved on their attitude index. However, using predictive analyses is a different analytical approach than comparing groups. It might be useful for future research to investigate post-survey action planning with an integrated cross-lagged panel design to answer different, but adjacent research questions concerning the predictability of action planning behavior.