Automatic for the People: Implementing Robotic Process Automation in Social Work

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Abstract. This short paper reports exploratory results from an ongoing longitudinal study on the introduction of robotic process automation (RPA) of financial support in a Swedish municipality. The study combines interviews, observations and surveys with a focus on the employee experience. Preliminary results show positive expectations yet there are concerns relating to the long-term effects of increased automation.

Background

IT systems for social work have been the subject of criticism (Gillingham, 2015). Yearly surveys from a Swedish union have identified social workers as the group having the most negative impact of IT on their working conditions (Lindström, 2016). It was therefore a surprising success when Robotic Process Automation (RPA) was introduced in the Swedish municipality of Trelleborg, and social workers were freed from many routine administrative tasks and could focus on their clients. Since then, there has been a rapid introduction of RPA in municipalities all over Sweden. However, media reports from other municipalities show that success
is not always guaranteed, and there are reports of social workers resigning in protest to the changes.

Robotic Process Automation has evolved over almost a decade (Slaby, 2012) and is currently receiving strong attention from both private and public organisations as a cost-effective solution to automate processes. Though rule-based it is a first step towards more advanced automation in e-Government and with it issues of fairness, accountability and transparency (Brown et al., 2019). Yet, there is still very limited research on RPA, and to our knowledge none that takes an employee perspective.

Social Work is a field that has received limited attention in the CSCW community, with the exception of the work by Boulus-Rødje (2018). Social Work can be defined as “a practice-based profession and an academic discipline that promotes social change and development” (Truell, 2014). There is a long debate over the pros and cons of IT in social work (Fuller, 1970). However, most of these discussion focuses on client interventions rather than administrative tasks (Reamer, 2013). There are some exceptions to this rule. Gillingham has written extensively on the subject, with a focus on best practices (e.g. 2015, 2019). Boulus-Rødje (2018) looked at Danish caseworkers’ IT use from a knowledge management perspective. Svensson & Larsson (2018) studied digitalisation in social care in Helsingborg, and noted a focus on technology and less on user involvement. Ranerup (2018) analysed values related to implementation of RPA in Trelleborg. Lagesten & Andersson (2018) formulated a research agenda for social work and information systems, focusing on IT governance and usability issues. Recently Devlieghere & Roose (2019) and Gillingham (2019) investigated issues of transparency and algorithmic accountability in the intersection of ICT and social work, thus introducing some of the issues related to RPA.

This ongoing study answers to the call for more research from Boulus-Rødje (2018) and it contributes to the emerging literature on RPA. At this stage the study is informed by the two overarching research questions: what are (1) the benefits and (2) the challenges of robotic process automation for caseworkers?

Case Study

The implementation of RPA is studied at the division of financial support in the municipality of Uppsala, with a focus on caseworkers. The case study has a qualitative, longitudinal approach, combining interviews, observations and surveys, informed by the theory of technological frames (Orlikowski & Gash, 1994). The first data collection aimed at creating a baseline, whereas the second (at the end of 2019) will focus on the experience of automation. The first data collection consisted of interviews with caseworkers, line managers and project leaders, some from other municipalities (N=14), two days of observation in situ.
and a survey to the caseworkers at the division (N≈150, response rate ca. 60%). Below are the preliminary observations.

The short-term goal of the RPA project is to reduce the administrative burden on caseworkers, and to give clients faster responses to applications. In the longer term, more resources can be allocated to social work. During the interviews the respondents reflected upon their work, the current IT and the upcoming implementation. The respondents mainly focused on the prospect of increased effectiveness but also on legal certainty. Overall, the respondents described a sense of trust in the ongoing developments. The survey supported the findings from the interviews. There was a positive attitude towards the RPA solution (87% thought RPA would make their work more effective). The possibility of having more time to work with clients was seen as positive, but respondents also cautioned that increased digitalization might leave some clients more vulnerable and that caseworkers’ insights into their clients’ situation might be reduced when more of the process was automated. One respondent summarised the challenge in the following words (translated):

If we don’t trust the robot we will not increase effectiveness as we will be double checking everything. If we trust the robot too much we may blur our own judgement instead.

The participatory observations provided insights into the traditional bureaucracy that the caseworkers were operating in. The hierarchical structure was noticeable (during meetings, in the physical layout of the workplace, in reporting). The dependence on paper was also tangible, with case files being carried around, security lockers in the caseworkers’ rooms, and classic in- and out-boxes on their desks. Much of the communication with clients was also still based on paper mail. What was most striking during the participatory observations was however the interaction with the case management system. It had numerous usability issues ranging from the overall interface design to half implemented features, that required the caseworkers to find workarounds (such as a secure messaging channel with no support for attachments). Furthermore, the work process as such resulted in double documentation, parallel handling of paper and digital information etc. Hardware was up to date with mobile phones and laptops but security restrictions (and usability issues) led to the laptops being stationary. The planned RPA implementation will address some of these issues, more specifically the cut-and-paste manoeuvres and calculations that are time consuming. As most of the issues were related to the case management system a legitimate question is why this could not be solved by updating the system, rather than adding a new software layer. According to the project managers this was in part due to the fact that software providers so far had not responded to such requests. The introduction of RPA did seem to stir the market, and the attitude from the system providers seemed to be changing. In summary, there is a potential to improve work through RPA but there a number of challenges, ranging from user involvement over to the subtler aspects of algorithmic decision making.
Discussion

Besides the obvious limitation of being an ongoing study this is still only one case and there is a need for more research on both first line workers in social care in general and in relation to RPA in particular.

It would seem that the preconditions for reaping the benefits of RPA are in place. Thanks to the self-service portal most client data is received in digital form, a prerequisite for RPA. The legacy system requires a large amount of repetitive procedures to compensate for various technology gaps. The caseworkers believe that the RPA can indeed increase effectiveness, and to some extent also legal correctness. The challenges are subtler and will perhaps be more visible at the end of the case study. Process development and task-technology fit seems critical but the actors seem aware of this. User involvement seems to have been an issue in other cases, it remains to be seen if that will be a factor here as well. On a longer term there are other challenges that perhaps are the most interesting and that call for more research. These relate to the impact of automation, automated decision making and even artificial intelligence on the caseworkers and ultimately on their clients.

References


