

## Shift handover situations: The example of technicians in Antarctica



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### Introduction

Turnovers between teams within the industrial field enable to ensure work continuity thanks to reliable communication on the operative system statement. Through this turnover errors made in the past could be avoided in the future, thus, efficiency at work could be improved (Nonaka, 2002). Previous research studied turnover in the industrial field (Karsenty, 2011) as well as the medical field with nurses (Boucheix & Coiron, 2008). The standard turnover organization in these areas mainly consisted in a three-team shift during 8 hours (3X8).

In Antarctica, the turnover takes place once a year or sometimes for more than a year (until 16 months).

The general purpose of this study was to examine the turnover (relève) between outgoing and incoming winterers in Terre Adélie, with an ergonomic approach and a situated analysis from the technicians' work adapted to polar environment.

### Method

#### Population

Data were collected in 2010-2011 during the summer campaign, through 16 technicians such as blacksmiths, plumbers, electricians, carpenters, vehicle engineers, precision engineers, power plant managers and power plant deputies. The winterers group was composed of 8 males for the outgoing team (Average age : 34; S.D. 12,5) and 8 males for the incoming team too (Average age : 28,1; S.D. 9,1).

#### Measure

Specific methods to understand professional practices and to pick out procedures during turnover were used such as explication interviews (Vermersch, 2009) and instruction au sosie (Clot, 1999). These two types of interviews question actions leading to the description of procedures during turnover.

#### Analysis

Data were transcribed and a grounded theory was used to categorise verbatim (Corbin & Strauss, 2008).

### Results

Four contexts have been detected as influencing the turnover process: organizational, socio-affective, material, and functional (Figure 1). Examples showed these contexts impact on the turnover.

Results showed a general organization of the turnover in six steps (Figure 2).

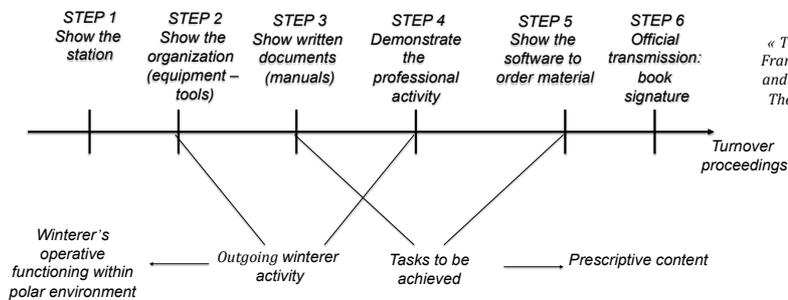


Figure 2. The general organization of the turnover

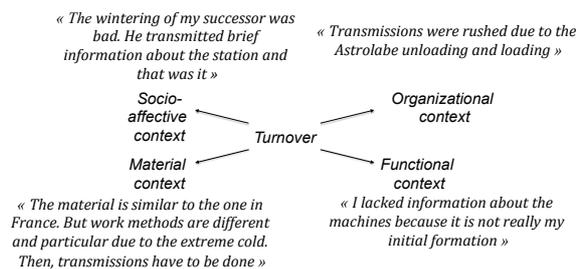


Figure 1. Context influence on the turnover's quality



### Discussion

Turnover in Antarctica is systemic, complex and dynamic related to the human, technical and operative adjustments to environmental hazards. Polar environment specificities have significant consequences on the operational activities of technicians' turnover.

There is an adjustment of professional practice to polar context, achieved during wintering, developing specific skills and tacit knowledge (Lejeune, 2011), which are communicated sometimes through oral transmissions. Because of the professional activity regulation during wintering, the turnover could be considered rather as experience feedback (Pastré, 1999) than a instructions transmission. Consequently, creating a REX (Retour d'EXpérience) based on wintering could be suggested. Polar conditions enable the development of specific skills which have to be transmitted in order to improve efficiency.

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