

NIELA KLEINSMITH¹
BAS KOENE²
JEROME GAUTIE³
CORALIE PEREZ⁴

Job Rotation and Multi-Skilling in the Semi- Automated Warehouse

March, 2018

Work Package 2: QuInnE Developmental Tools

Deliverable 2.7: Logistics/ Retail - III-3C

¹ *Erasmus University, Rotterdam School of Management, Netherlands*

² *Erasmus University, Rotterdam School of Management, Netherlands*

³ *Centre d'Economie de la Sorbonne, France*

⁴ *Centre d'Economie de la Sorbonne, France*

QuInnE - *Quality of jobs and Innovation generated Employment outcomes* - was an interdisciplinary project investigating how job quality and innovation mutually impact each other, and the effects this has on job creation and the quality of these jobs.

Drawing on the Oslo Manual, both technological and non-technological innovation were investigated. Through quantitative analyses and qualitative organization-level case studies, the factors, as well as the mechanisms and processes by which job quality and innovation impact each other were identified.

The QuInnE project brought together a multidisciplinary team of experts from nine partner institutions across seven European countries.

QuInnE Project Member Institutions:

- *Lund University, Sweden*
- *The University of Warwick, UK*
- *Universitaet Duisberg-Essen, Germany*
- *Centre Pour La Recherche Economique Et Ses Applications (CEPREMAP), France*
- *Magyar Tudományos Akademia Tarsadalomtudományi Kutatóközpont, Hungary*
- *Universiteit van Amsterdam, The Netherlands*
- *Erasmus Universiteit Rotterdam, The Netherlands*
- *Universidad de Salamanca, Spain*
- *Malmö University, Sweden*

The project ran from April 2015 through July 2018. The QuInnE project was financed by the European Commission's Horizon 2020 Programme 'EURO-2-2014 - The European growth agenda', project reference number: 649497.

More information about the project and project generated publications and material can be found at www.quinne.eu.

QuInnE contact person: Chris Mathieu, Christopher.Mathieu@soc.lu.se or quinne@soc.lu.se.

The QuInnE teaching cases and teaching notes are based on the confidential field research conducted in the context of the QuInnE project. They are written to provide material for training and class discussion rather than to illustrate either effective or ineffective handling of a management situation. Personal names and identifying information from the research cases have been altered for the purpose of confidentiality. The case studies and teaching notes have been developed in cooperation with RSM Case Development Centre of Rotterdam School of Management, Erasmus University (www.rsm.nl/cdc).

Copyright © 2018 RSM Case Development Centre, Erasmus University. This is an open access article distributed under the terms of the Creative Commons Attribution–NonCommercial–NoDerivatives 4.0 International license, except for logos, trademarks, photographs and other content marked as supplied by third parties. No license is given in relation to third-party material. Version: July 2018. Please address all correspondence to cdc@rsm.nl.



Job Rotation and Multi-Skilling in the Semi-Automated Warehouse

53-year-old Bernard Morel was tired of the voices droning on in the room around him and let his thoughts drift. Two decades ago, when he began working at this retail logistics warehouse, things had been different. When products arrived at the warehouse, Morel, as a receiver, had to sort them, check them off a paper list, and make sure they were allotted to the right customer order. Other workers then grouped together a single order's products from different truckloads or picked the products from stocked shelves, stacked them on a pallet, and wrapped and loaded the pallets for trucking to the final destination, generally a retail customer's store. Morel used to move a lot during the day. He would greet and socialize with colleagues throughout the warehouse. Work was somewhat stressful and wages were low, but conditions were liveable, working hours were fixed, the team leader sometimes came around and patted him on the back for a job well done, and a few colleagues had even become friends.

Thomas Lambert's loud voice broke into Morel's musings. The HR manager of the retail logistics warehouse explained the company's perspective on the current discussion:

'Employee flexibility is necessary to the continued existence of this warehouse. Increasing customer demands and product flows are putting a strain on the whole industry. If I don't have this versatility among my employees, then I'm obliged to break up contracts, to have a part-time job here and another one there, and that just doesn't work, neither for the employees nor for the company.'

Morel was jolted back to the present day reality: a stressful, increasingly digitalized -- and increasingly repetitive -- job with less camaraderie, highly variable hours that allowed for little planning of his personal life, and wages that were being eroded away.

Some 15 years ago, when online shopping was just starting to take off, automation had been introduced in the warehouse. For Morel, his work life had mostly gone downhill ever since. Machines and digital monitoring had taken over some of the best parts of his job: being free to walk around, socializing and, it seemed, even some of his wages. Now, when products arrived, parcels had to be scanned; there were no more paper forms to be exchanged or signed off. Someone had to feed the machine: repeatedly loading parcels on an automated carousel, which read the bar code on the parcel and whisked the parcel to the correct exit off the carousel, corresponding to a specific customer's order. The persons at the exits had to continuously unload the parcels and stack them up on pallets. The machine never slowed down, and it certainly never socialized. Persons feeding the machine and unloading had to keep pace and weren't free to move away from the machine or walk around as they had before. According to one of Morel's co-workers:

We are completely dependent on the machine, and the machine never stops...At the end of the day, I'm much more tired than before. At my work-post, I don't walk anymore, I just keep rotating to pick parcels from the pallet and place them on the conveyor. In the

old warehouse, I handled over 1000 parcels per day; now I'm doing 700 an hour. Even if I don't carry the loads anymore, I'm very tired.

According to Morel, it was 'repetitive, tiring work', and no one really wanted to do the machine-related jobs. But the automated carousel was just one example of how new technologies were impacting employees in the warehouse. On the one hand, there were employees who -- when the company's other traditional warehouse had shut down to consolidate operations to this semi-automated one -- had refused to be transferred, because they feared the worsened working conditions brought on by automation. On the other hand, Morel had heard about other warehouses, nearing full automation, with conveyor belts, self-driving machines and sensor-controlled robots, and feared that these would soon be gobbling up all human jobs, including his.

Morel was aware of the labour shortages in warehouses due to the bad working conditions: 'In the company's distribution centres (DCs) last year, 400 new employees were trained to work, and now, less than 20 of those remain.' There was even talk in the company of bonuses for employees who brought in new workers that stayed through the entire peak season.

The advent of online shopping meant that customer demands were increasingly variable and urgent, so that even as employee productivity had to increase, so, too, did employees have to become more flexible.

That was the particular subject of the meeting today, between employee representatives, such as Morel, and warehouse management, represented by Lambert, the HR manager. Management had been trying to sell the idea of job rotation and multi-skilling to employees for several years. As Lambert pointed out: 'Obviously, multi-skilling aims at fostering internal flexibility. It reduces the need for temp agency workers, especially for punctual replacements, such as holidays or sick leaves.' Lambert highlighted the benefits of job rotation to employees:

- Multi-skilled employees meant more full-time contracts for regular employees, and fewer part-time and temporary workers;
- Multi-skilled employees were more marketable, enjoyed enriched jobs, and could more easily find new jobs or be promoted;
- Employees who rotated through different jobs had a lower risk of developing strain-related injuries from doing the same repetitive motion all day long.

Employees like Morel, on the other hand, argued that job rotation had too many negative effects. For example, job rotation:

- Undermined the previous horizontal hierarchy, based on seniority, of working from most to least strenuous jobs. Over time, as employees grew older and more experienced, they could be 'promoted' to the less strenuous or painful jobs in the warehouse, which also made their jobs more sustainable. Job rotation would likely sabotage this hierarchy, and older workers might have to face physically demanding jobs once again.
- Led to internal strife and rebellion, as some workers refused to hold the most strenuous jobs: 'We're supposed to change jobs once a day, but everyone doesn't rotate even if it's supposed to be mandatory...Some jobs, such as the machine feeder, have terrible working conditions.'

- Allowed management to put pressure on underperforming employees: 'Those who do not meet the productivity targets are assigned to the most painful jobs.'
- Eliminated predictability, social adhesion to one team, and an employee's 'professional identity': 'When you arrive in the morning, you don't know to what tasks and what sector in the warehouse you are going to be allocated.'

Morel went on to explain the employee union's view on job rotation and their long-standing disagreement with management:

At first, job rotation was voluntary, and we tried to make sure that it remained voluntary. But with the savings that the company was trying to make, we felt that, increasingly, managers were putting pressure on employees to make them move around and learn new skills. So we tried to negotiate financial compensation to recognize those employees who agreed to do multi-skilling, to say: they are doing more so they must be compensated accordingly. But the company was never willing to negotiate on that. And then it became playing with words: we argued that those employees who rotated were actually doing different jobs and should be paid more than those who couldn't. But the company argued that multi-skilling was actually reinforcing employees' skills, and that they shouldn't be compensated for receiving on-the-job training and increasing their own marketability.

Lambert acknowledged this:

I consider that multi-skilling should not be rewarded because employees benefit from multi-skilling on their own: employees move through different areas in the warehouse and learn the different information systems, different equipment, and different teams. They benefit from enriched jobs in comparison to static colleagues. In addition, each year a small group of employees is offered the possibility to get their experiences formally accredited.

Lambert continued by explaining how each year, a small group of employees out of the several thousands who worked in the company's warehouses were given the opportunity of receiving a formal diploma in logistics, which the company sponsored and helped them prepare. This diploma arguably made them more employable and more likely to be promoted -- elsewhere, as the company itself allowed for little upward mobility of warehouse workers. Still, this accreditation was not available to most employees, only to a select few, even though all employees were requested to rotate jobs.

One of Morel's colleagues questioned management's argument, explaining that a warehouse worker, even if he learned to do all of the different tasks involved in receiving, handling and shipping products, still remained just a warehouse worker: 'Does the accumulation of five poor jobs make an enriched job? I'm not sure, especially when you see the quality of each job.'