

# Data Driven HR at Magyar Telekom

Capstone Project by Roland Papp, MS in Business Analytics

## Background

I was headhunted by Magyar Telekom NyRT. to join the direct team of the CHRO as HR Analytics Senior Manager. I supported various projects with the aim of transforming HR to become data-driven.

## General findings

The HR department is very divided in terms of analytical readiness. There are many state-of-the-art analytics projects and expectations, however many colleagues lack even Excel skills. Therefore, nice projects and a data science team are not enough, all relevant employees need continuous training.

## Projects I supported

### OrgVue Project

I supported the pilot implementation of OrgVue, a cloud-based HR analytical tool. It was developed to analyse time spent on different tasks by employees and hence the number of employees touching each task, however combined with SAP-based employee data and game-based psychometric testing it proved to be an especially powerful tool.

### Workforce Transformation Project

This is one of the most important ongoing projects at HR with multiple action teams. I am supporting all teams with advice in data analysis and also by doing analysis in R and creating reports by ggplot2.

### Training Colleagues – Data Analysis & Visualisation Workshop

I organised and held Data Analysis & Visualisation Workshops for my colleagues at HR. I explained everything from the basics and asked them to make visualisations on pen and paper to enhance their creativity. The workshops were especially popular (first occasion full 8 minutes after sending out the email) and I received very nice feedbacks. There is a huge demand for analytical knowledge, so I recommend for every Data Scientist working among non-data-scientists to teach some basic analytical knowledge to colleagues. It may be interesting to note that participants were much more active when their number was 7 compared to 12, so smaller group number is advisable.

### Recruitment Dashboard

#### Getting, cleaning and interpreting the data

My most important project for the summer was to implement an interactive Recruitment Dashboard. Recruitment is not SAP based, therefore the issue was that the Head of Recruitment, HR Business Partners and the CHRO did not use to have any information about how recruitment is doing, what are the problems and red flags and how recruiters are doing.

Data may only be obtained by the recruiters, so the first task was to merge together the 82 reports sent by current and former recruiters. From these I created the Application and Requisition spreadsheets that contain each application and requisition line by line.

After many weeks of data cleaning and multiple discussions of variable meanings and desired KPIs, I decided to create the Dashboard using Tableau.

### Visualisation in Tableau

I created 3 interactive stories of dashboards in Tableau. Filters such as Year, Recruiter's name and CXO area have an effect on every chart on the currently shown dashboard.

### Time to Hire

Our most important Recruitment KPI is Time to Hire, which we defined as the time elapsed since a position is posted until someone is hired on that position. Unfilled positions were analysed later. I found that different recruiters have very different Time to Hire and positions are also filled in different time at Magyar Telekom compared to T-Systems Magyarorszag. Gender also affects Time to Hire: When the hired candidate is male, Time to Hire is 11 more days. Longest Time to Hire corresponds to New Positions, shortest to Maternity leave.

### Requisition analysis

I compared success rates of male and female applicants across departments and Hay grade (salary level). I found that for example it is easier to get hired in the HR department for women than man but it is opposite for the Legal department. Different recruiters have different gender bias and it is interesting to note that the direction of bias is not connected to their own gender.

I also analysed popularity of positions across CXO areas, Hay grade and Professional areas. It is interesting to note that Costumer Service and IT positions were the least popular ones while Assistant and HR positions were the most.

I found that the number of applicants does not depend on posting duration, however that is an obvious example that correlation is not causality. Requisitions are typically closed after enough number of candidates.

I also analysed the unfilled rate of posted positions and the number of open positions by different factors but I cannot publicly disclose information about these findings.

### Application analysis

I analysed the number of candidates and their success rates on bar charts, map (Tableau is a beautiful geographical tool) and timeline. I also analysed open applications about which I cannot publicly disclose information.

### Further work

I plan to build a Machine Learning model to predict Time to Hire at the time a position is posted so that the corresponding department and manager may be informed how long they need to wait for the new colleague.

















