

Data and Humans: HR Analytics in Recruitment

Máté Gaál

Data Analytics & Digital Overarching Solutions Manager
@ Deutsche Telekom IT Solutions Hungary



Who am I?

Máté Gaál



Data Analytics & Overarching Solutions Manager @ DT ITS HU

Specialized in Data Analytics and Digitalization of overhead functions

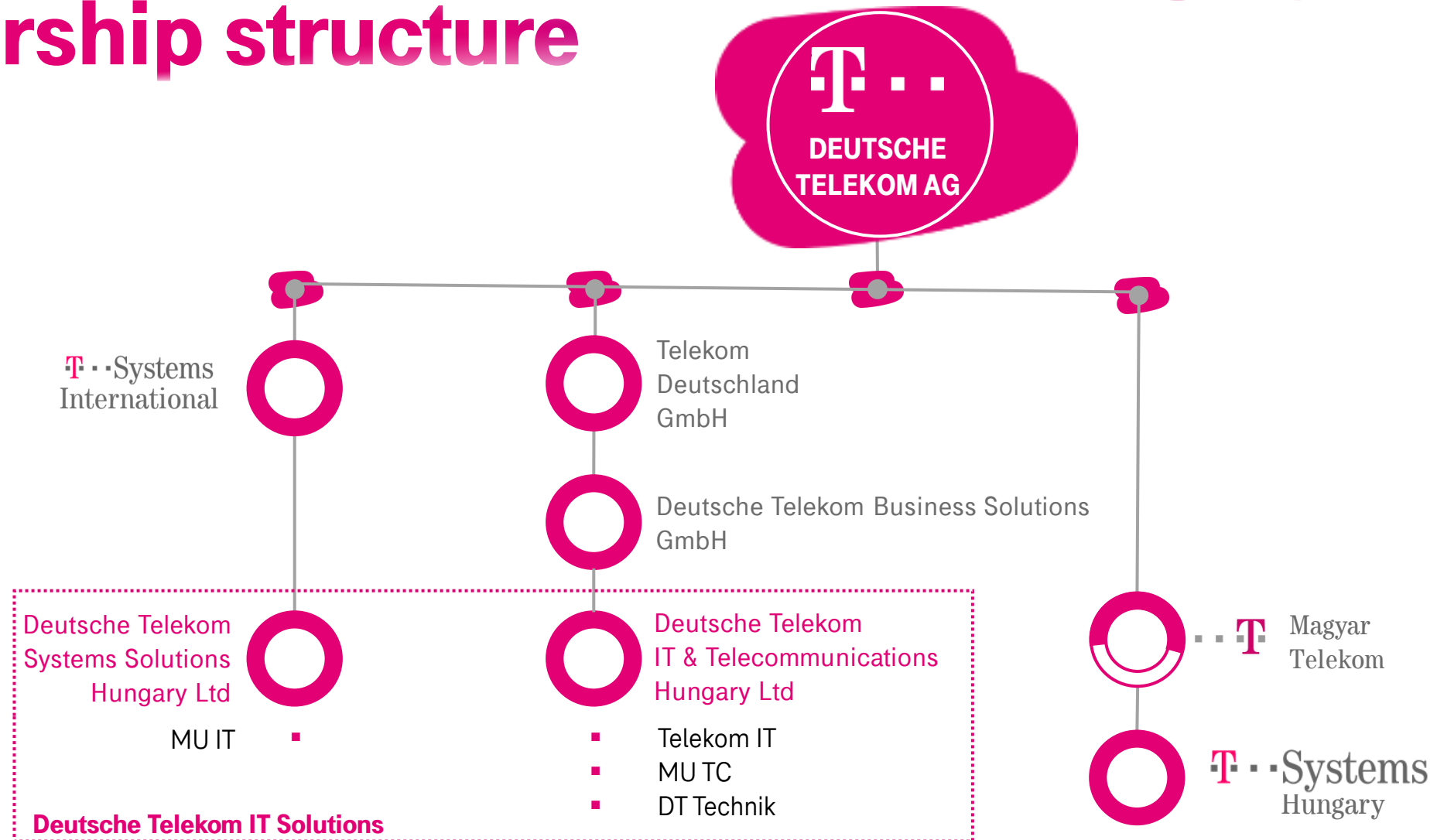
I'm a husband and father of 2

My hobbies include strength trainings and metal music

E-mail: mate.gaal@t-systems.com

[LinkedIn](#)

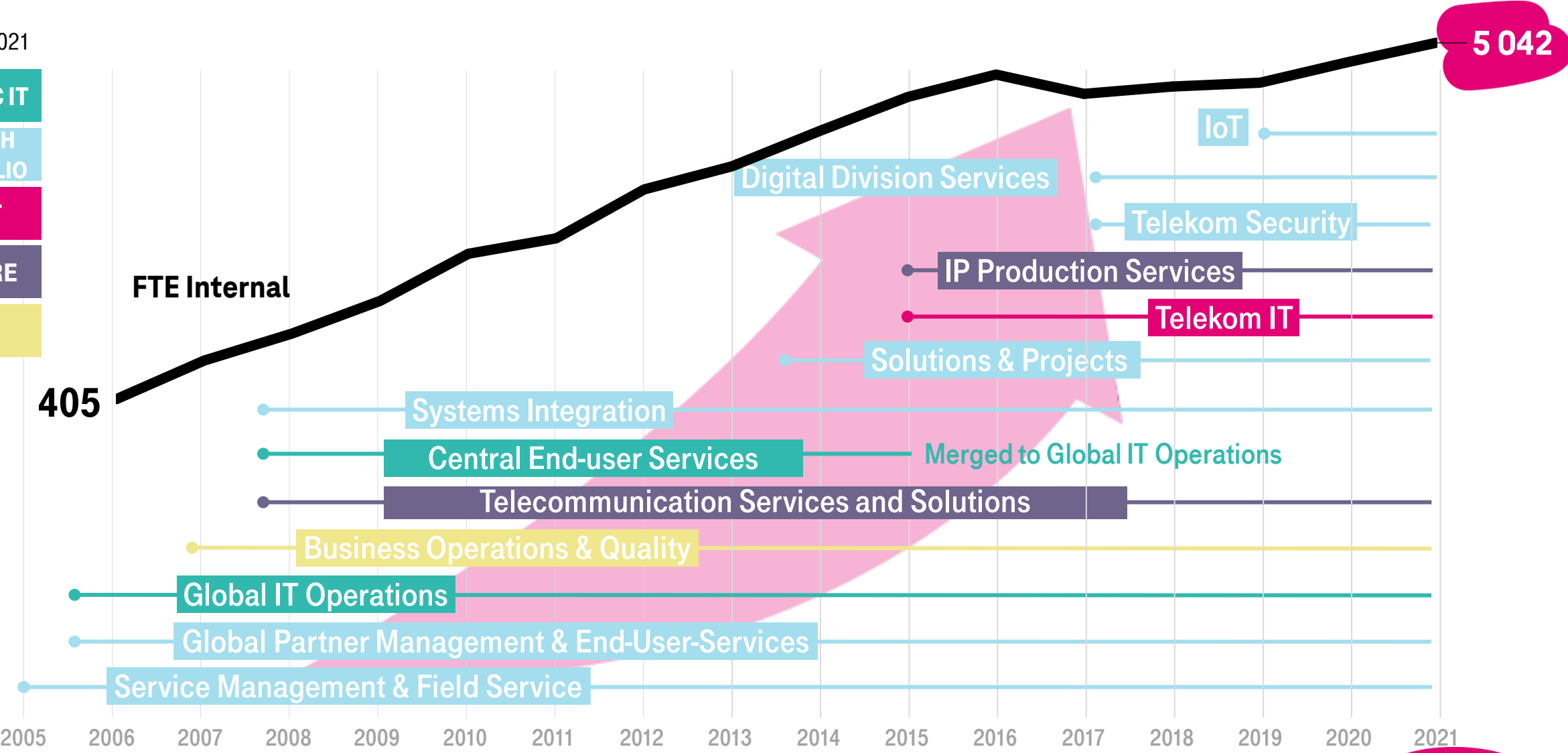
Deutsche Telekom IT Solutions Hungary Ownership structure



We created a diverse and colorful company

ACT 12/2021

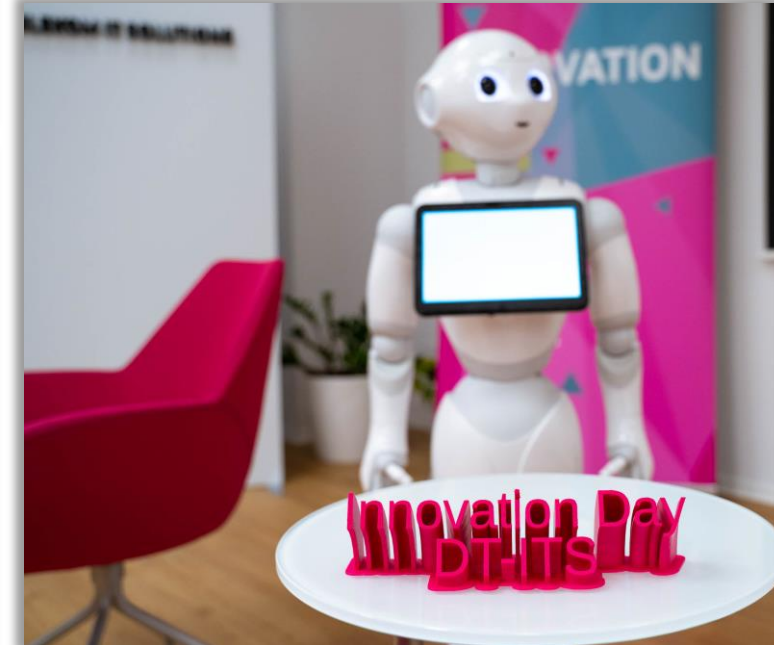
- CLASSIC IT
- GROWTH PORTFOLIO
- TEL IT
- TC CORE
- GDE



We serve more than 1000 customers who rely on our services



Innovation



T Systems

INNOCAN'TWAIT

WEDNESDAY 03. AUGUST
CLOUD SERVICES INNOVATION FRAMEWORK · DT-ITS INNOVATION · TSI CLOUDHUB · INNOVATION & BUSINESS STRATEGY · TELEKOM IHUB · QUANTUM COMPUTING WITH PLANQ · INNOVATION IN DEVSECOPS · ROAD CONDITION ANALYZER

THURSDAY 04. AUGUST
NVIDIA OMNIVERSE · TSI INNOVATION LAB · PARTNERMANAGEMENT & INNOVATION · INNOVATION TO PORTFOLIO · IBM QUANTUM COMPUTING · MULTICLOUD OF MADNESS

T-SYSTEMS

„INNOVATION STREET FOOD FEST“ 2022

3-4 AUGUST
BUDAPEST, MILLPARK & WEBEX

Painting the scene

What happened?

Unprecedented amount of hiring demands from Deutsche Telekom companies for high profile colleagues

- Market challenges
- Old systems, processes, reports failed under new conditions
- Tension and escalations due to falling behind expected schedule

In 2021 - 1500
colleague to hire

950
External

350
Internal

190
Trainee

BI for the rescue ?

BI Report was
delivered in 1 Month

But it did NOT
helped 😞

We analyzed
WHY?

Key Persona:
Executives internal and
external

Report was
too analytic

GOALS: Shorten time
to gain insight from
data

Action point 1

Transform **visual representation** of the data

Rule of all rules:

No more than **6** data
points per view

Action point 2

Think in **KPIs**

What questions
would you ask to the
data?

KPIs need to answer
those

Visual From this



MIB Report

Contact: [Recruitment Team](#)

Version: 2.0

Last report as of **Monday, January 3, 2022**

Test Data

Opened MIBs in last 6 Months (Blank) Opened MIBs	As per last Report 125,89 Average Opened Days	2455 Opened MIBs	1578 Filled MIBs	MIBs in last year 547 Cancelled MIBs	490 Ongoing MIBs	As per last report 62,02 Average Time to Offer
Total until last report 690 Ongoing MIBs	97 120+ <180 MIBs	204 Opened MIBs	115 Filled MIBs	MIBs in current year 10 Cancelled MIBs	192 Ongoing MIBs	84,89 Average Time to Fill
	181 180+ MIBs					

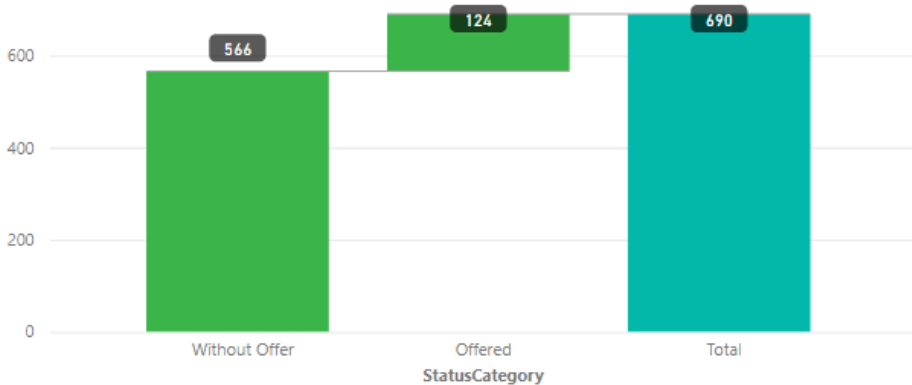
➔
[Go to Ongoing MIBs](#)

➔
[Go to Number of MIBs](#)

➔
[Go to Filled MIBs](#)

➔
[Go to Leadtimes](#)

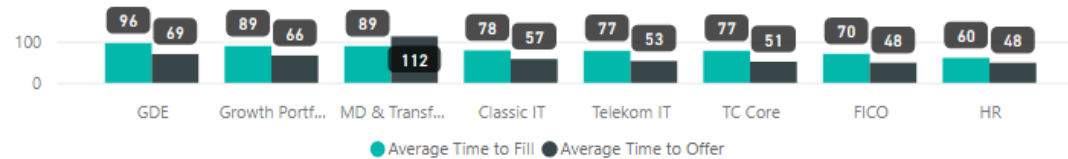
Ongoing MIBs by StatusCategory



Average Times by Year and Qtr



Average Times by Divisions



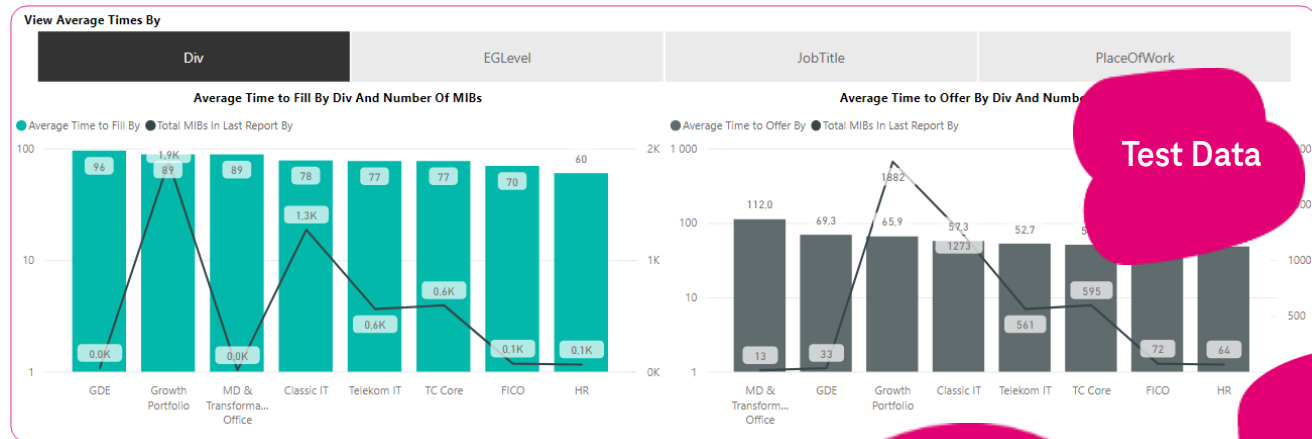
Visual To this



KPIs

- Prio1 Demands** – Data category moved to source system and made it to Dimension
- Time to Offer, Time to Hire** – Average times to measure Recruitment process
- Dynamic Dimensions and Axis**– To avoid page creep
- Squad Capacity** – Based on theoretical capacity of the recruiters, how many days to fullfill just the current demands

```
1 Average Time to Fill By =
2 CALCULATE
3 (
4 if(HASONEVALUE('Table'[Type]),
5 SWITCH(VALUE('Table'[Type])
6 , "PlaceofWork", CALCULATE([Average Time to Fill]
7 , TREATAS(VALUE('Table'[Key])
8 , FactRequests[Candidate Place of Work]))
9 , "Div", CALCULATE([Average Time to Fill]
10 , TREATAS(VALUE('Table'[Key])
11 , DimOrg[Division]))
12 , "EGLevel", CALCULATE([Average Time to Fill]
13 , TREATAS(VALUE('Table'[Key])
14 , FactRequests[EG level]))
15 , "JobTitle", CALCULATE([Average Time to Fill]
16 , TREATAS(VALUE('Table'[Key])
17 , FactRequests[Job Title]))
18 )
19 )
20 , FILTER(DimOrg, DimOrg[Division] IN {{Selected Divs}})
21 , FILTER(FactRequests, FactRequests[Job Title] IN {{Selected JobTitles}})
22 , FILTER(FactRequests, FactRequests[Candidate Place of Work] IN {{Selected PlaceOfWorks}})
23 )
```



Being excellent means...

You get more work to do 😊

Hunger for information grew

Business driven switch to a cloud base Application Tracking System (ATS)



Resulted in many changes in reporting too

Creative Solutions – AKA If it works..

New system Data API has some boundaries, so we needed PowerShell also to

- Get data from Data API
- Download csv files to landing directory
- And the SSIS to load it into our DB

```
# Alap változók létrehozása
$LogFile="$($CONFIG.LOGFILEPATH)\$(get-date -Format 'yyyy-MM-dd-hhmm')_$(CONFIG.LOGFI
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", 'Start' | out-file -FilePat

# API secret változók beállítása
$CLIENT_
$CLIENT_
$ErrorCo

try {
    # API Access Token -t kér:
    # Lekéri egy riport utolsó file -ját
    $report_content=(Get-SRReportLastFile -par_access_token $access_token -par_report_
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "Get last file of report

    # Array -t készít a riportból
    # $report_content_array=convertfrom-csv -InputObject $report_content

    # Létrehoz egy virtuális drive -ot
    New-PSDrive -Name "$(CONFIG.PSDRIVENAME)" -Root CONFIG.REPORT_DEST_FOLDER -PSPr
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "Create PSDrive ($(CONF

    # Exportálja a riport tartalmát egy file -ba.
    Export-SRReportContentToFile -content $report_content -dest_file "$(CONFIG.PSDRIV
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "Export report to: $(CC

    # Ellenőrzi, hogy létrejött -e a file a cél útvonalon:
    $FileCheckError=0
    if ((test-path -Path "$(CONFIG.PSDRIVENAME):$(config.REPORT_DEST_FILE_PREFIX)$($
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "Check destination file"

    # Eltávolítja a virtuális drive -ot
    Remove-PSDrive -Name "$(CONFIG.PSDRIVENAME)"
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "Remove PSDrive" | out-f
}
catch {$ErrorCount = 1}

# Ha hiba történt vagy nem sikerült a file letöltése, akkor levelet küld.
if (($Errorcount + $FileCheckError) -ne 0) {
    $EmailSubject = "SmartRecruiters Riport letöltés hiba"
    $EmailBody = "A script az $(env:COMPUTERNAME) s
    if ($ErrorCount -gt 0) {$EmailBody += "A letölt
    if ($FileCheckError.count -gt 0) {$EmailBody +=
    Send-MailMessage -To CONFIG.EMAILSENDTO -Subj
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd h

} # if hiba
"{0} {1}" -f "$(get-date -Format 'yyyy-MM-dd hh:mm:ss')", "End" | out-file -FilePat
```

Why all of this was a success?

Business
commitment and
involvement

Including
CxOs

IT (BI) side was
driven to have the
WILL to
UNDERSTAND

And most
important: We had
one common
purpose

What the future looks like?

Re-Work
reporting on new
data source (ATS)

Process mining on
recruitment related
processes

Go ahead of the
market – predictive
modells

In 2022 - 1150
colleague to hire

Thank you!
Questions?

