

# **PUBLIC FINANCE DATA WAREHOUSE IN THE SERVICE OF THE HUNGARIAN STATE TREASURY**

PEMPAL TCOP, BELGRADE – 2024. 06. 05.

# OVERVIEW

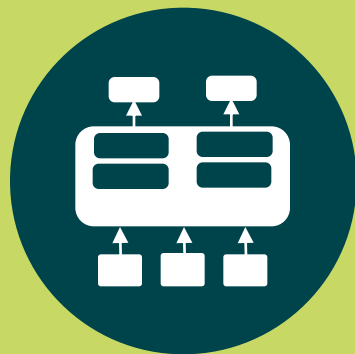
## DATA WAREHOUSE

1. FOUR DWHS IN THE TREASURY
2. PUBLIC FINANCE DWH
  1. BUSINESS CONNECTIONS
  2. TECHNICAL PARTS
  3. TEAM

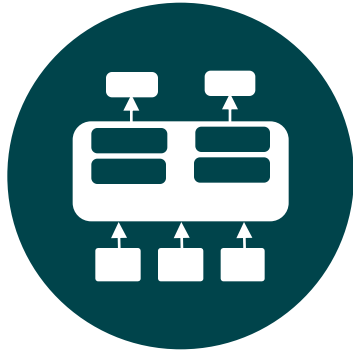
## DWH IMPLEMENTATION PROCESS

1. PLANNING
2. TRAINING & TESTING
3. THE CONVERSION
4. TEACHING & SUPPORT
5. DEMAND MANAGEMENT

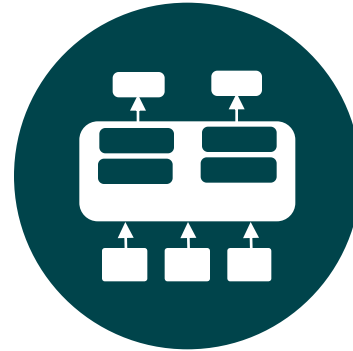
# THE DATA WAREHOUSE



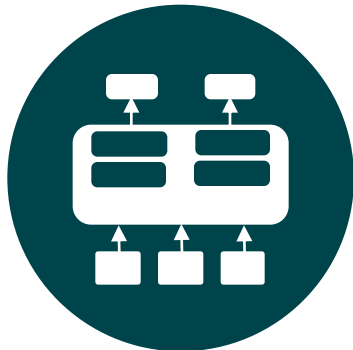
# DATA WAREHOUSES IN THE TREASURY



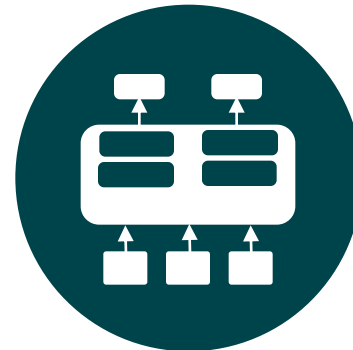
Agricultural and  
rural development



Social security and  
family support



Local government



Public Finance

# Agricultural and Rural Development DWH



- Hungarian Paying Agency
- EU and domestic subsidiaries
- Statistical reports
- Fraud detection
- Process monitoring
- When? Whom? How much? Why

# Social Security and Family Support DWH



- Family support subsidiaries
- Pension
- Cash benefits
- Social supports
- Rehabilitation supports
- Permission / Statement / Payment
- Life path from birth to death
- When? Whom? How much? Why?

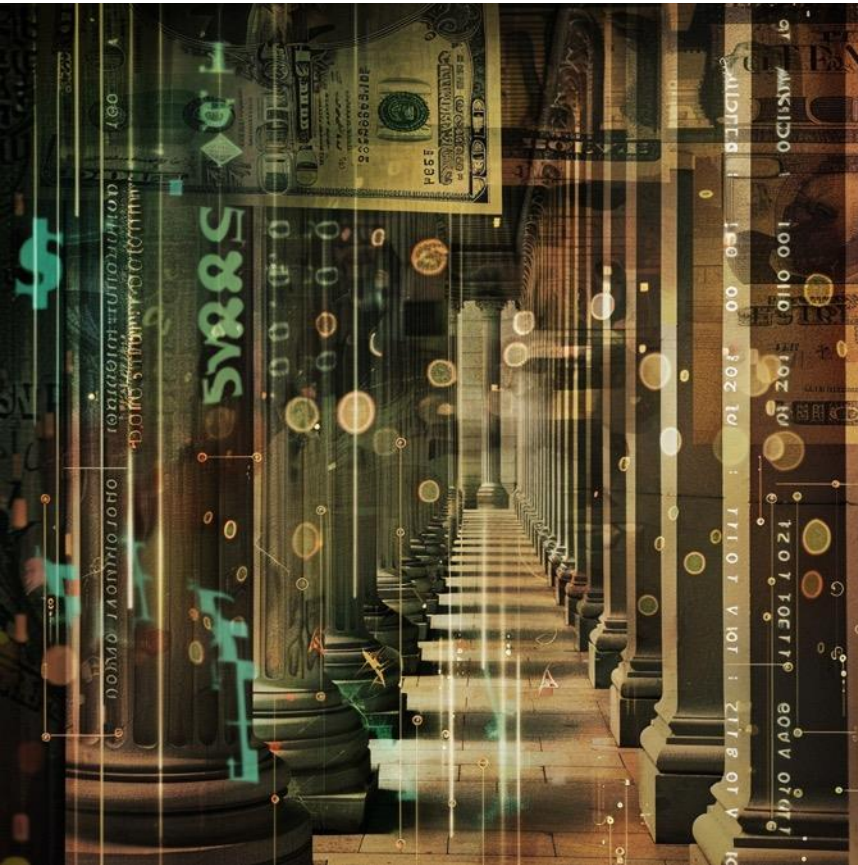
## Local Government DWH



- **Local taxes**
- **Accommodation (Turism) data**
- **Local government financial data**
- **Municipal management**
- **Document management**



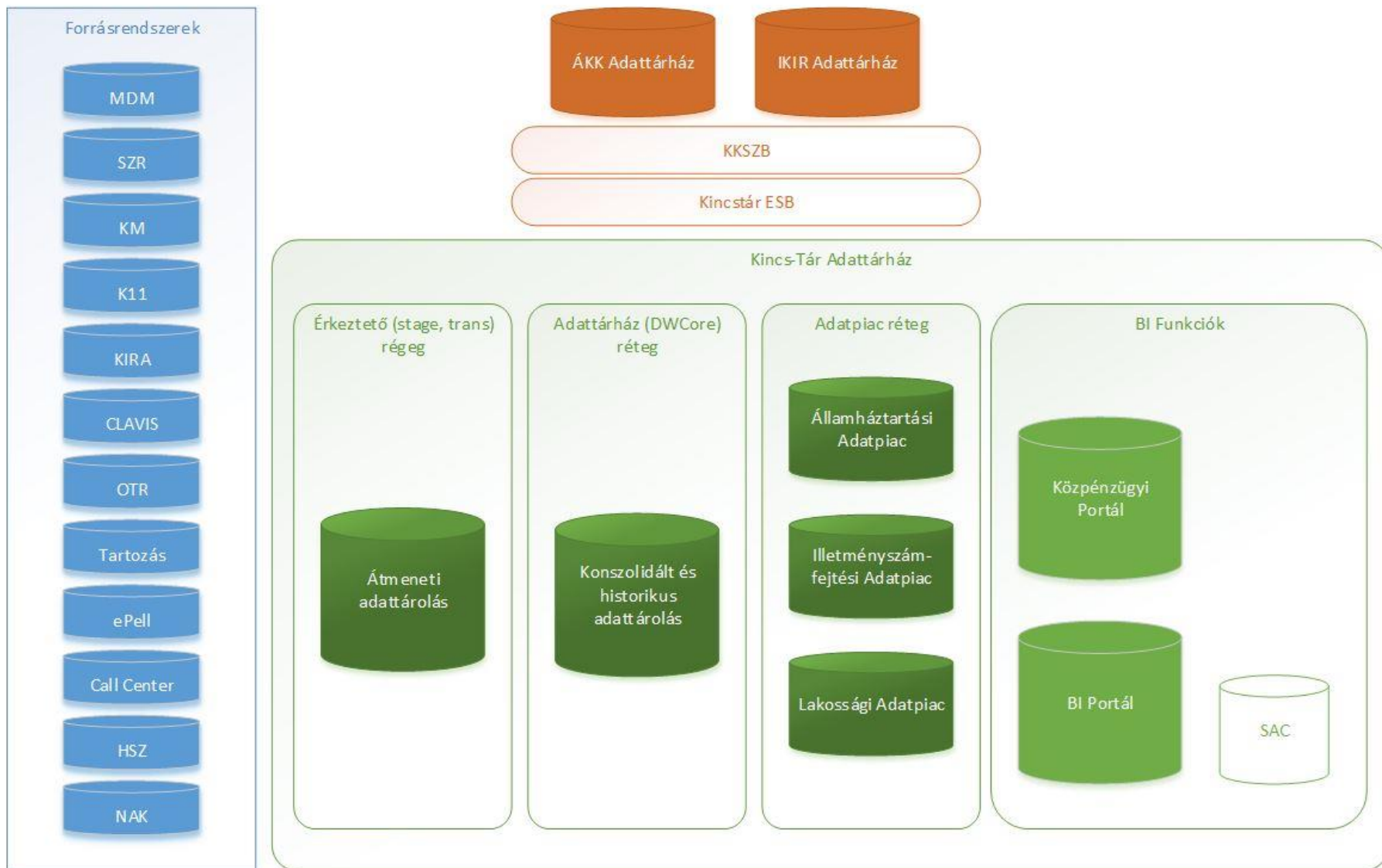
## Public Finance DWH



- Payroll for the entire public sector
- Appropriations
- Payment transactions
- Fulfillment
- Subsidy
- Institutional budget reports



# THE PUBLIC FINANCE DWH



# The Team: Business Intelligence Competence Centre (BICC)

## I. LEAD DEVELOPER

- Steering development directions, managing demand process, handling supplier orders
- Should understand the whole DWH with the business and IT processes

## II. PROJECT MANAGER

- Task management and administrative duties related to the lead developer's work
- More process-oriented than strategic ones

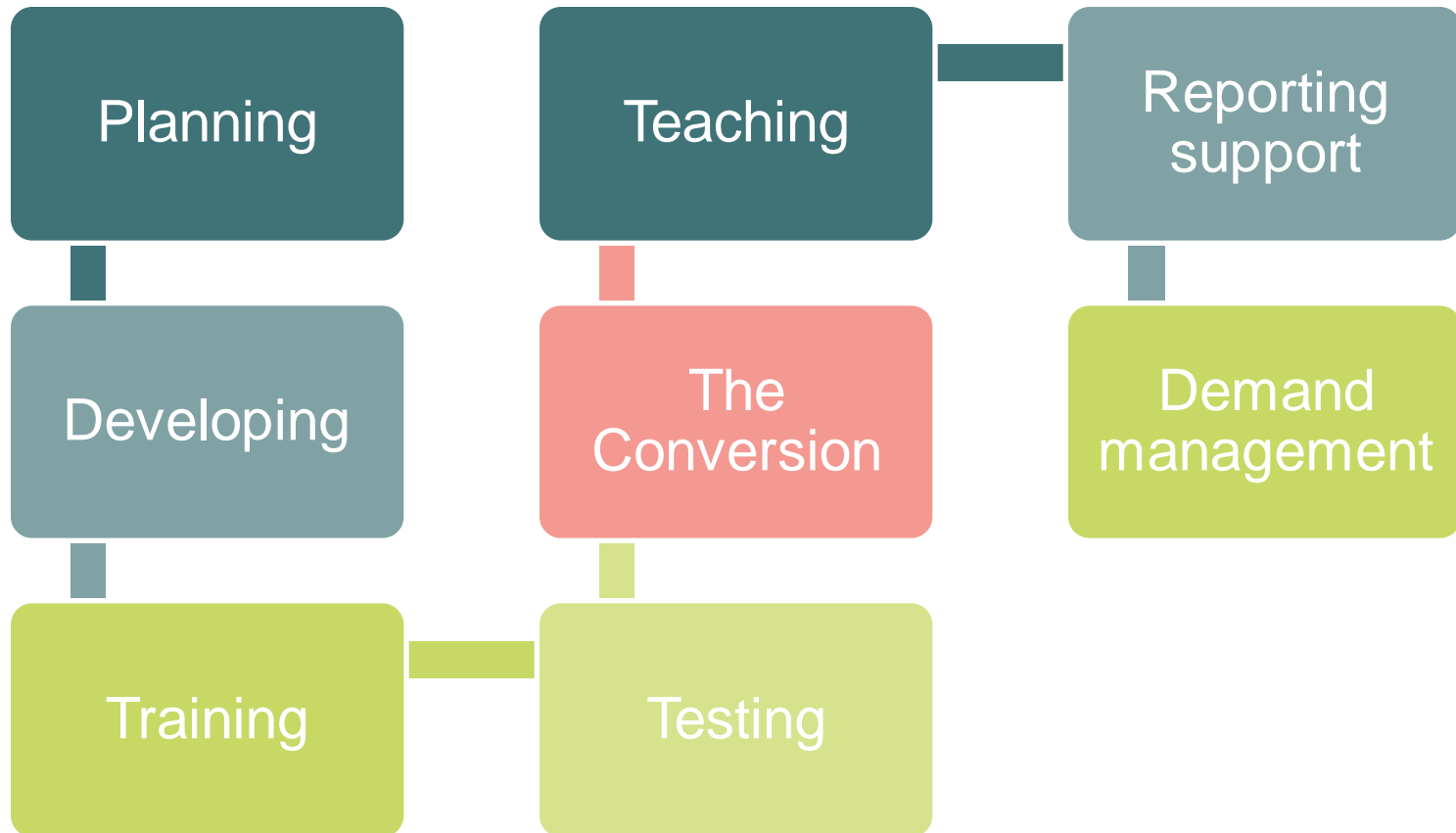
## III. SWISS KNIVES: BUSINESS ANALYST & DEVELOPER

- Problem detection, development, testing, report & dashboard creation, training,
- building bridges between IT and business

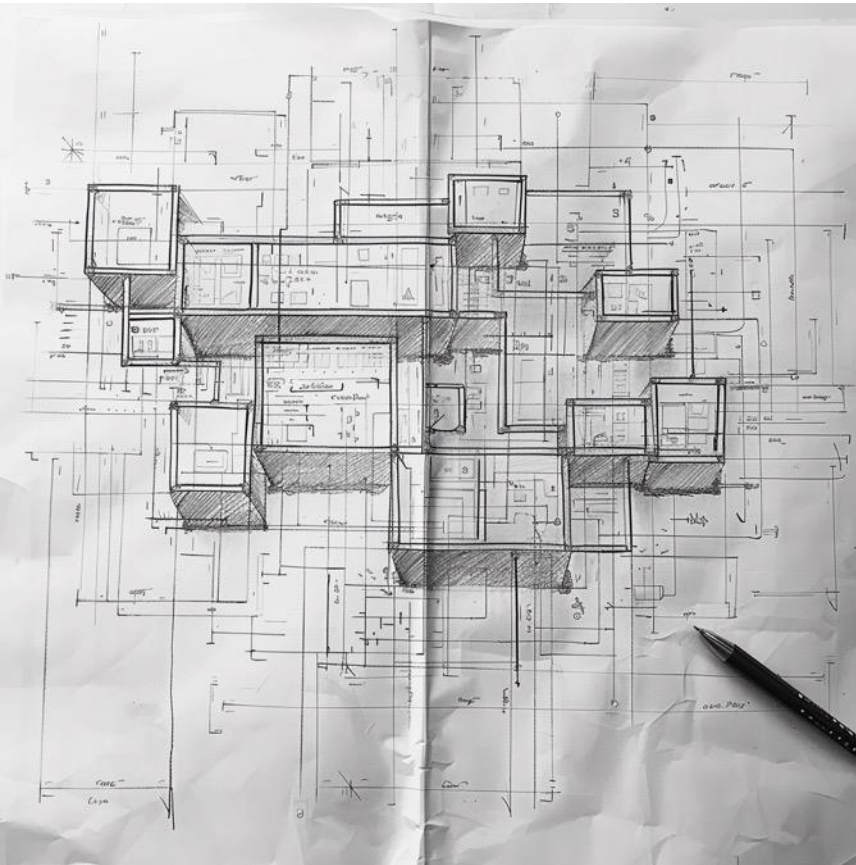
# DATAWAREHOUSE IMPLEMENTATION



# THE PROCESS OF THE IMPLEMENTATION

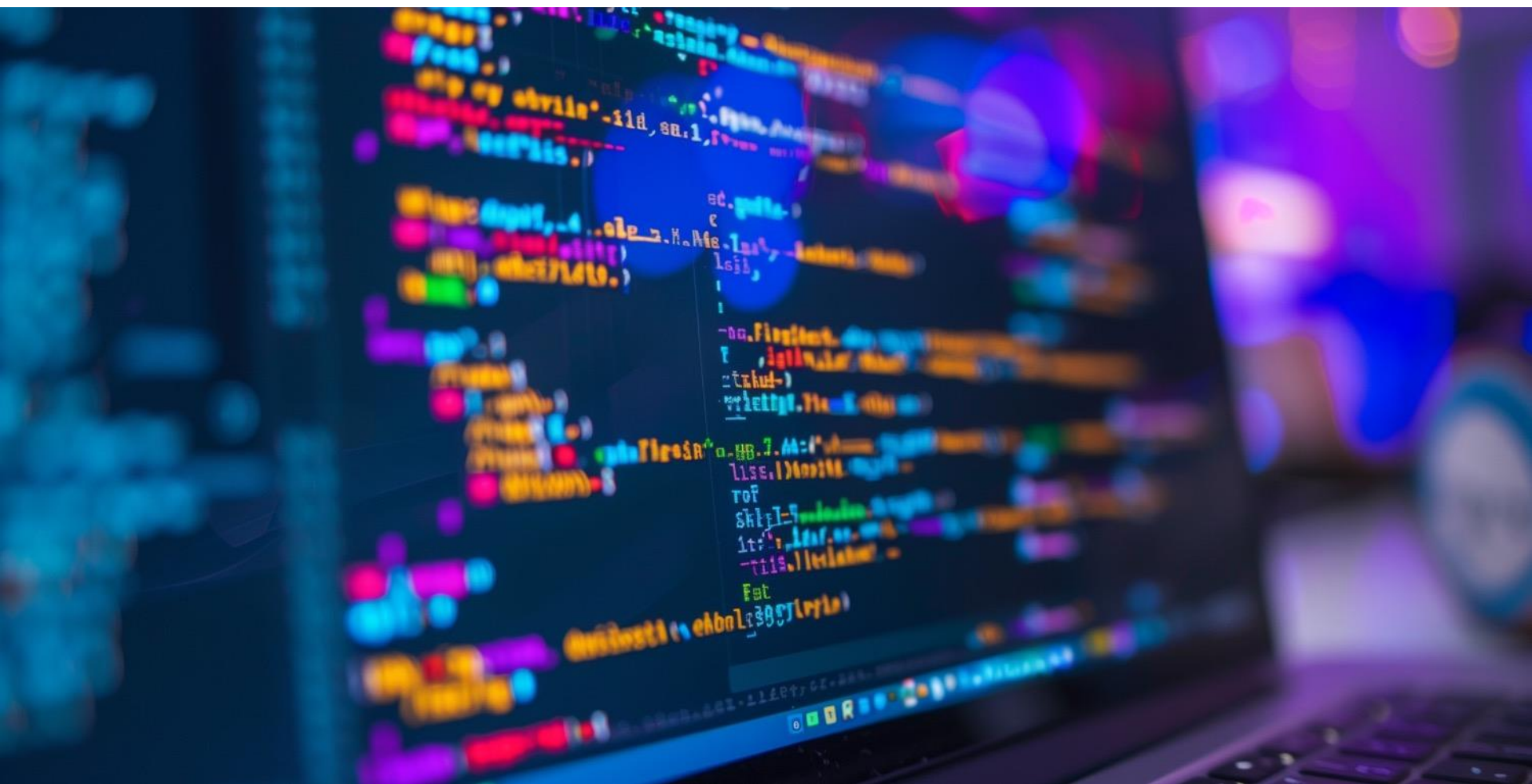


# Planning



- Detailed identification of data circles at field level
- Thorough understanding of business processes involved
- Identification of required data, its sources, and handling methods
- Deep insight into business operations
- Understanding workflows aiding in data circles design, development, and implementation

## Execution (Development)





## Training on tool use



- Business users need to participate in testing.
- Users need training on the extraction tool.
- Users do not need to know programming languages.
- Users may be skeptical and unmotivated due to extra work.

# Testing



- The testing phase is the most challenging.
- The tool's limitations become apparent at this stage.
- The tool's capabilities are still not fully understood.
- Project timelines might need to double to accommodate unforeseen issues.
- Design flaws are likely to surface during this stage.

# The Conversion



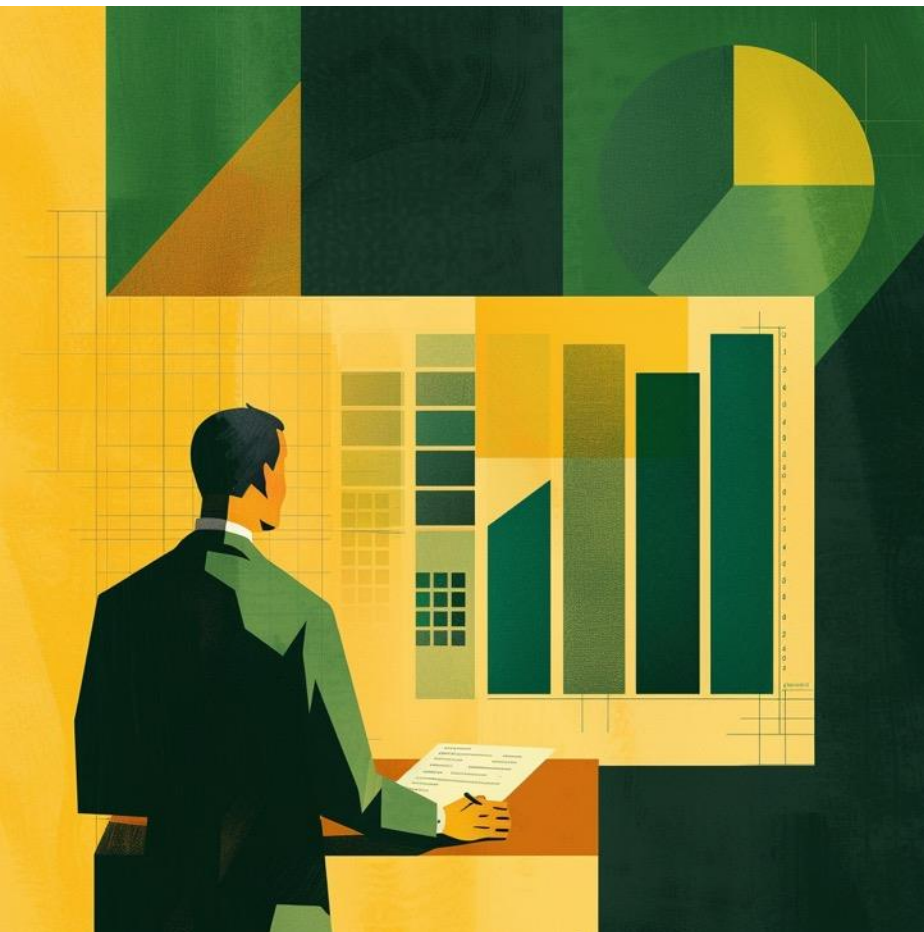
- Need to convince users that the data warehouse functions correctly.
- Users may question the calculation methodologies used.
- Significant efficiency improvements may be realized (e.g., 6-hour report condensed into 30 minutes).
- Users may fear redundancy due to the system's efficiency.
- Implement practical steps such as producing reference and control tables, and performing daily data quality checks.
- Establish a daily routine to review and confirm the appropriateness of data warehouse numbers.
- If discrepancies are found, identify and quantify the deviation.

# Teaching



- Delve into multi-day sessions to understand the extraction tool and data warehouse.
- Businesses understand their data but struggle to extract it from the data warehouse.
- Education is needed to understand how to extract and interpret data from the warehouse.

## Reporting support

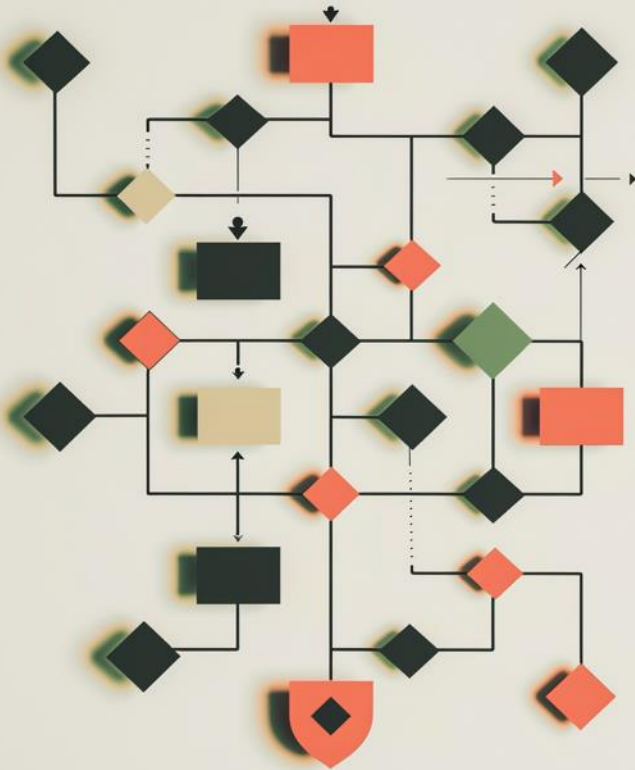


The result of points 5-6 is the established trust, as a result of which they will want to do everything with this tool, but they are still uncertain. As a result, we have come up with the following educational-support structure:

- 1-2 days of practical training sessions
- personal meetings with problem solving on the next two weeks' mornings (with pre-sent questions)
- Following this, individual mentoring, which means that the business colleague gathers a few questions, we sit down next to him/her and show him/her on his/her own machine or on Teams how to do it.



## (Demand management)



- Understand customer usage and needs when self-service BI is functioning
- Interaction with the customer typically occurs during problem-solving or error fixing, resulting in quasi-negative encounters
- There are no positive encounters during success experiences
- Identify a method to channel development and change needs into system development



# HOW THE TOOL WORKS?

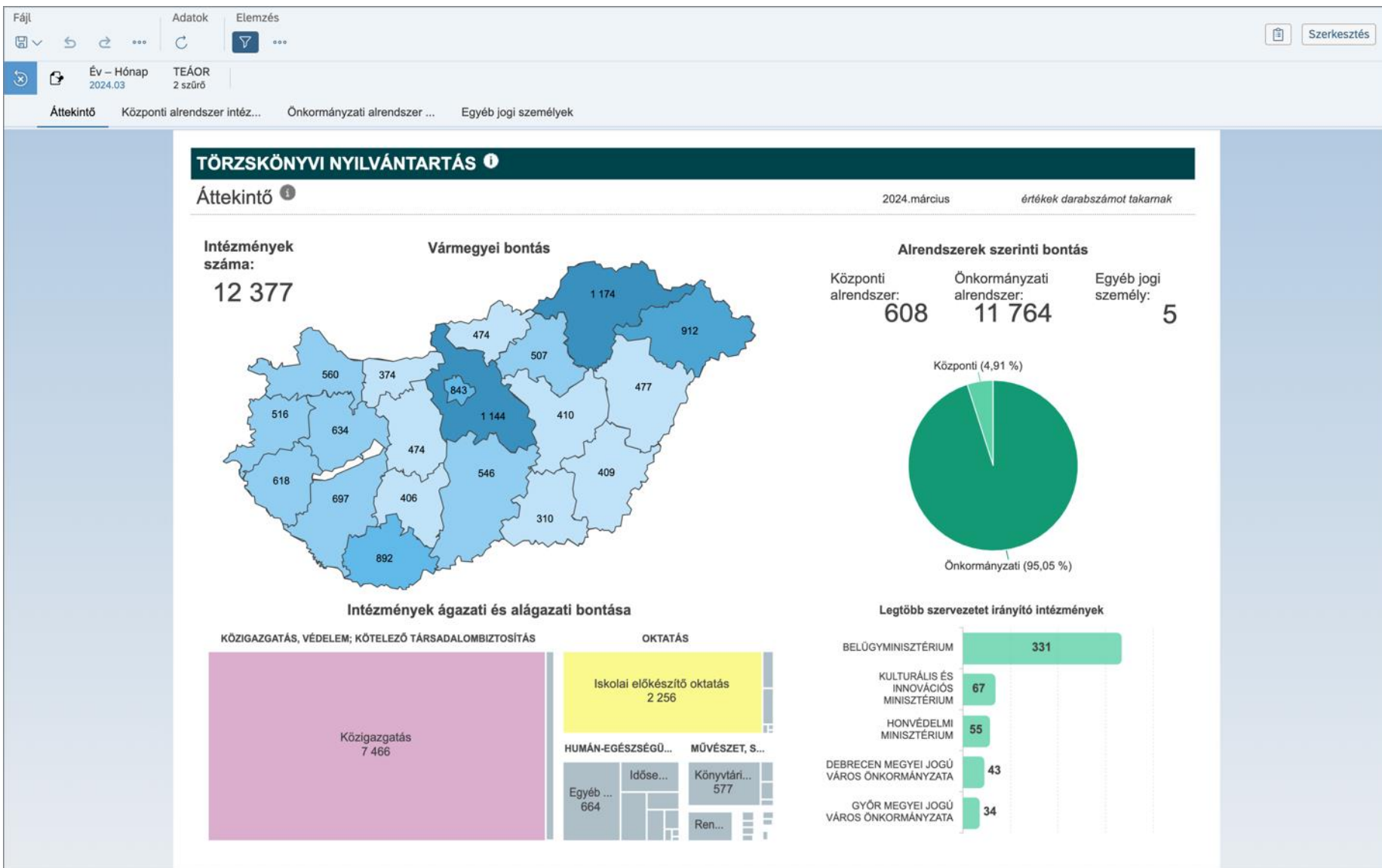
Public Finance Portal



# Közpénzügyi Portál

<https://kpp.tcs.allamkincstar.gov.hu>

# Registry records: Administrative institutions



# Data on the execution of the central budget

Fájl Adatok Elemzés

Vonatkozási nap: 2024.03.31

1 Áttekintő 2 Kiadások 3 Bevételek 4 Kiadások - Adminisztrat... 5 Bevételek - Adminisztrat... 6 Bevételek és kiadások r...

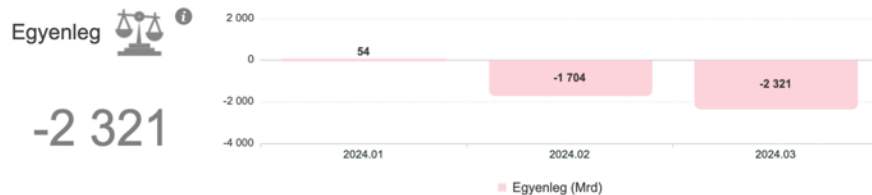
## KÖZPONTI KÖLTSÉGVETÉS VÉGREHAJTÁSA

Központi alrendszer - Áttekintő

2024.03.31-én

értékek milliárd Forintban

### Teljesítés tárgyévi alakulása



-2 321

### Teljesítés szektoronként

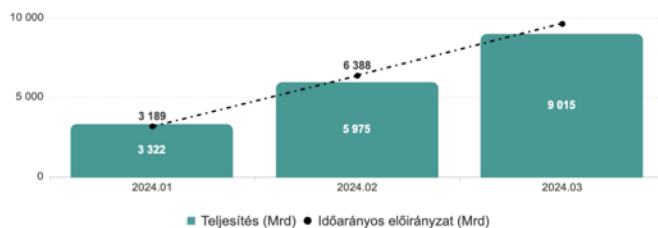
|                                 | Bevételek       | Kiadások         | Egyenleg         |
|---------------------------------|-----------------|------------------|------------------|
| Központi kezelésű előirányzatok | 5 040,16        | 5 064,27         | -24,11           |
| Intézmények                     | 796,62          | 2 019,66         | -1 223,04        |
| Fejezeti kezelésű előirányzatok | 72,20           | 1 163,38         | -1 091,18        |
| Társadalombiztosítási alapok    | 2 895,36        | 2 957,09         | -61,73           |
| Elkülönített állami pénzalapok  | 211,06          | 132,37           | 78,69            |
| <b>Összesen:</b>                | <b>9 015,40</b> | <b>11 336,77</b> | <b>-2 321,37</b> |

### Bevételek

23,3%

9 015

Előirányzat: 38 624



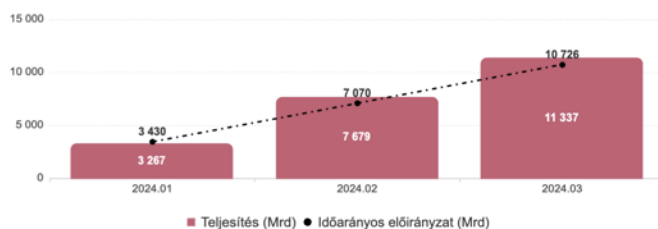
|                                 | Előirányzat      | Teljesítés      | Előirányzat végrehajtása |
|---------------------------------|------------------|-----------------|--------------------------|
| Központi kezelésű előirányzatok | 25 016,41        | 5 040,16        | 20,1%                    |
| Intézmények                     | 1 981,91         | 796,62          | 40,2%                    |
| Fejezeti kezelésű előirányzatok | 334,24           | 72,20           | 21,6%                    |
| Társadalombiztosítási alapok    | 10 443,87        | 2 895,36        | 27,7%                    |
| Elkülönített állami pénzalapok  | 848,06           | 211,06          | 24,9%                    |
| <b>Bevételek összesen:</b>      | <b>38 624,48</b> | <b>9 015,40</b> | <b>23,3%</b>             |

### Kiadások

26,4%

11 337

Előirányzat: 42 905



|                                 | Előirányzat      | Teljesítés       | Előirányzat végrehajtása |
|---------------------------------|------------------|------------------|--------------------------|
| Központi kezelésű előirányzatok | 17 938,63        | 5 064,27         | 28,2%                    |
| Intézmények                     | 9 453,70         | 2 019,66         | 21,4%                    |
| Fejezeti kezelésű előirányzatok | 4 405,88         | 1 163,38         | 26,4%                    |
| Társadalombiztosítási alapok    | 10 443,95        | 2 957,09         | 28,3%                    |
| Elkülönített állami pénzalapok  | 662,92           | 132,37           | 20,0%                    |
| <b>Kiadások összesen:</b>       | <b>42 905,08</b> | <b>11 336,77</b> | <b>26,4%</b>             |

# Main advantage: Free to use the Business Object

Query Panel



Add Query ▾

Query 1 ▾



T\_KVTV ▾

Type here to filter the tree



- ▾ T\_KVTV
  - ✚ ÁHT-T név
  - ✚ Alcím kód
  - ✚ Alcím név
  - ✚ Címrend
  - ✚ Cím kód
  - ✚ Cím név
  - ✚ Előirányzat csoport kód
  - ✚ Előirányzat csoport név
  - ✚ Unió albontás
  - ✚ Fejezet+alfejezet kód
  - ✚ Fejezet+alfejezet név
  - ✚ Fejezet+alfejezet név rövidítés
  - ✚ Fejezet kód
  - ✚ Fejezet név
  - ✚ Fejezet név rövidítés
  - ✚ Jogcímcsoport kód
  - ✚ Jogcímcsoport név
  - ✚ Jogcím kód
  - ✚ Jogcím név
  - ✚ Kiemelt előirányzat kód
  - ✚ Kiemelt előirányzat név
  - ✚ Közgazdasági besorolás kód
  - ✚ Közgazdasági besorolás név
  - ✚ Központi alrendszer kód
  - ✚ Központi alrendszer név

Result Objects



✚ ÁHT-T név

✚ Címrend

✚ Aktuális előirányzat ö...

✚ Összeg (HUF) riportba...

Query Filters



✚ Év In List ▾ 2024

**WE APPRECIATE YOUR  
ATTENTION!**

ÁKOS KÖRÖS, PROJECT MANAGER  
[KOROS.AKOS@ALLAMKINCSTAR.GOV.HU](mailto:KOROS.AKOS@ALLAMKINCSTAR.GOV.HU)