

# Plutus – A New Tool to Handle Metadata of Seasonal Adjustment



Mária Pécs – maria.pecs@ksh.hu

## What is happening in the HCSO?

HCSO operates a **centralized internal system for seasonal adjustment**: Experts of the Methodology Department work closely together with colleagues from subject-matter domain departments.

- **Methodological experts**: own the mathematical-statistical knowledge of time series analysis.
- **Subject-matter experts**: sound knowledge of specific time series.

The annual division of labour has two big runs:



**Beginning of every year**: experts make a whole annual revision of the models in case of every time series with software JDemetra+ (the Methodology Department is responsible for this task but key information is needed from the subject-matter domains)

**During the year**: the subject-matter domains refresh the data and models (this part of the work is also controlled by the Methodology Department)



## How did we do it until now?



At the beginning of every year the Methodology Department has sent a questionnaire to the subject-matter domains to collect as much information as possible on their time series to prepare for the annual model revisions.

## What is Plutus?

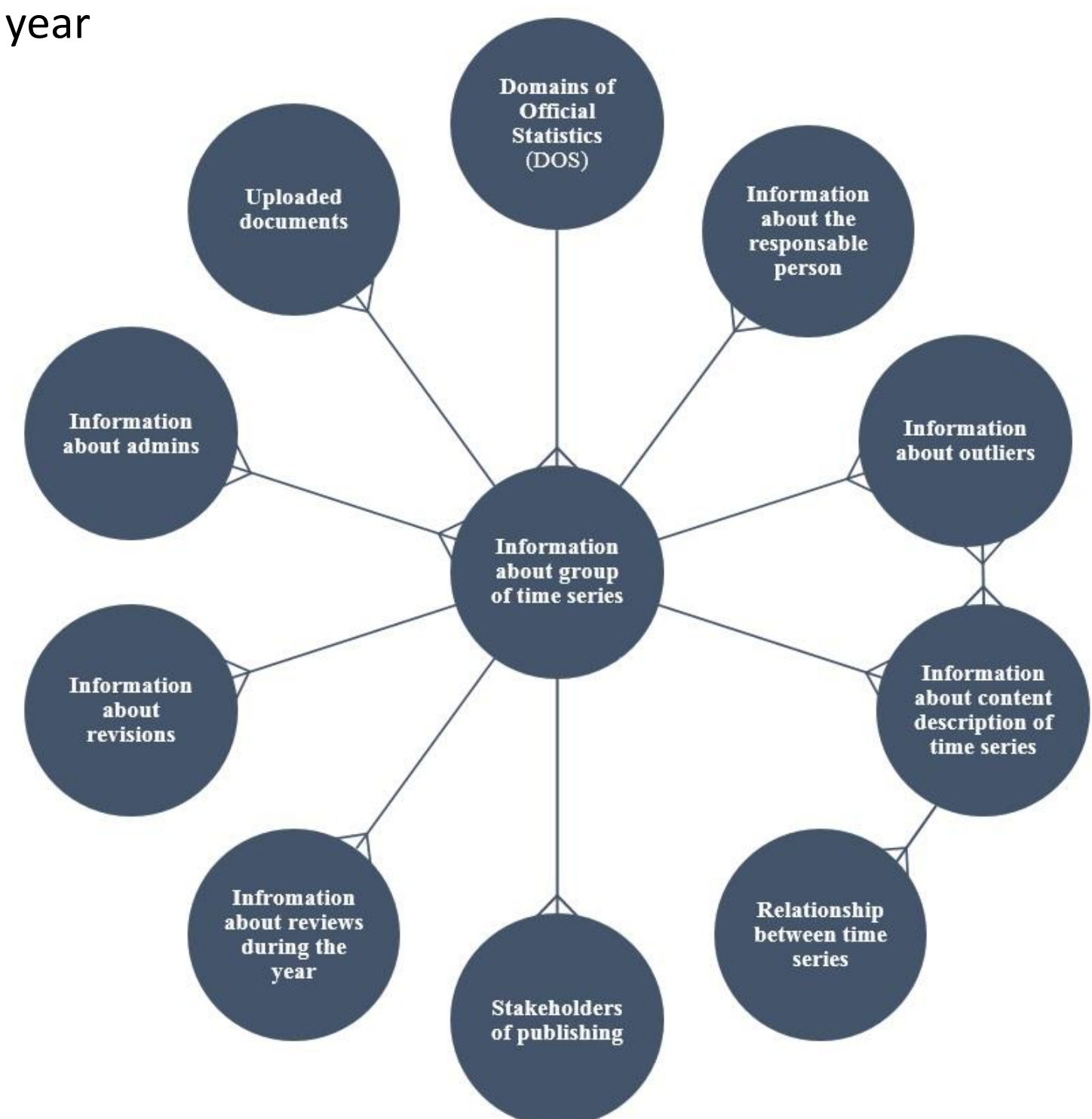
- Proper system that **guarantees the high quality results** for every National Statistical Institute in case of seasonal adjustment
- **Helps** to combine the mathematical-statistical knowledge for time series analysis and sound knowledge of the specific time series
- Helpful for all **cooperating** departments because they can see each other's information on their time series
- A system of databases with a **user friendly** interface, fully **metadata driven**

## What is the aim of Plutus?

- Supporting the collaboration of colleagues from different departments
- Solving the problem of increased data set

## What kind of information does the system have?

- The base of the database was our annual questionnaire
- **Most important information from the subject-matter domains' experts**: outlier events, information on seasonality, working and trading day effects, leap year effect, and so on
- **Revisions' and publications' dates** to organize the work during the year

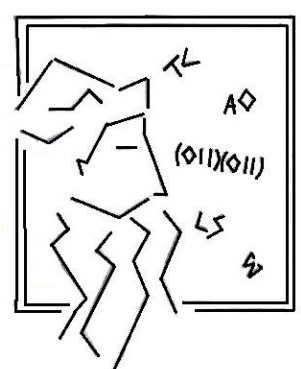


## What are the advantages of the Plutus?

- The whole system is more **transparent** than before
- The collected **metainformation can be linked** to any other metadata object
- Our colleagues have a reading right to all information which **makes the work easier** (especially true in case of aggregated time series such as the GDP)
- Plutus makes the work easier when a new colleague arrives in the HCSO
- Plutus collects and records **information on outliers**
- The system **can compare** which outlier is in the system, which is in the model and list the differences (the tool uses the output type csv matrix by JDemetra+ to check the outliers)

## What comes next?

- The system will be started to use on quarterly data in 2019, and will be extended for monthly data in 2020
- It will be connected to the Single Integrated Metadata Structure



### Why Plutus?

The tool is designed to support seasonal adjustment processes with software JDemetra+. Origin of the name: Demeter is the goddess of cultivation and fertility in the ancient Greek mythology. She was the reason for the seasons, seasonality. Plutus was one of her sons, who was the god of wealth. We would like to express the wealth of information with this name.