

# HARZEMLI, The DDI Based Statistical Production Platform



**Murat TUNÇEL**

**Head of Information Technologies Department**

**[murat.tuncel@tuik.gov.tr](mailto:murat.tuncel@tuik.gov.tr)**

# The QUESTION

❖ Is there a way to generate a standardized approach to statistics production with an increased level of quality and decreased workload?



## Why this QUESTION should be handled?

- ❖ The role of Statistical Institutes includes making surveys and disseminating data for statistical subjects.
- ❖ Statistical Institutes need to integrate the data of different subject-matter units with each other.
- ❖ Usage of common/standardized classification brings benefits for implementing GSBPM.



## Why this QUESTION should be handled? (cont'd...)

- ❖ Standardized data entry screens and standardized data send/receive methods in data collection.
- ❖ Standardized data model for dissemination.



# The SOLUTION

- ❖ **DDI + Rule Files + Classification Server => for survey part**
- ❖ **Uniform data model + Classification Server => for dissemination part**



# The RESULT

## ❖ HARZEMLI

### The DDI-based statistical production platform

- ✓ Metadata-driven, dynamically created web-based surveys that have similar look-and-feels
- ✓ Shortened and standardized IT processes with respect to metadata
- ✓ Metadata is actively used in production, analysis and data dissemination phases of GSBPM
- ✓ Standard names of all the variables in terms of data integrity
- ✓ Shortened duration for data collection, more time to analyze
- ✓ Easy integration for compilation of private sector data in related surveys
- ✓ Similar database tables whose structures are generated automatically



## The RESULT (cont'd...)



### ❖ MEDAS

#### ❖ Central Dissemination System – A subsystem of Harzemli Platform

- ✓ Reduced reporting and interface burden in dissemination
- ✓ Much easier comparability of data
- ✓ Correlation detection between any subjects for any end user

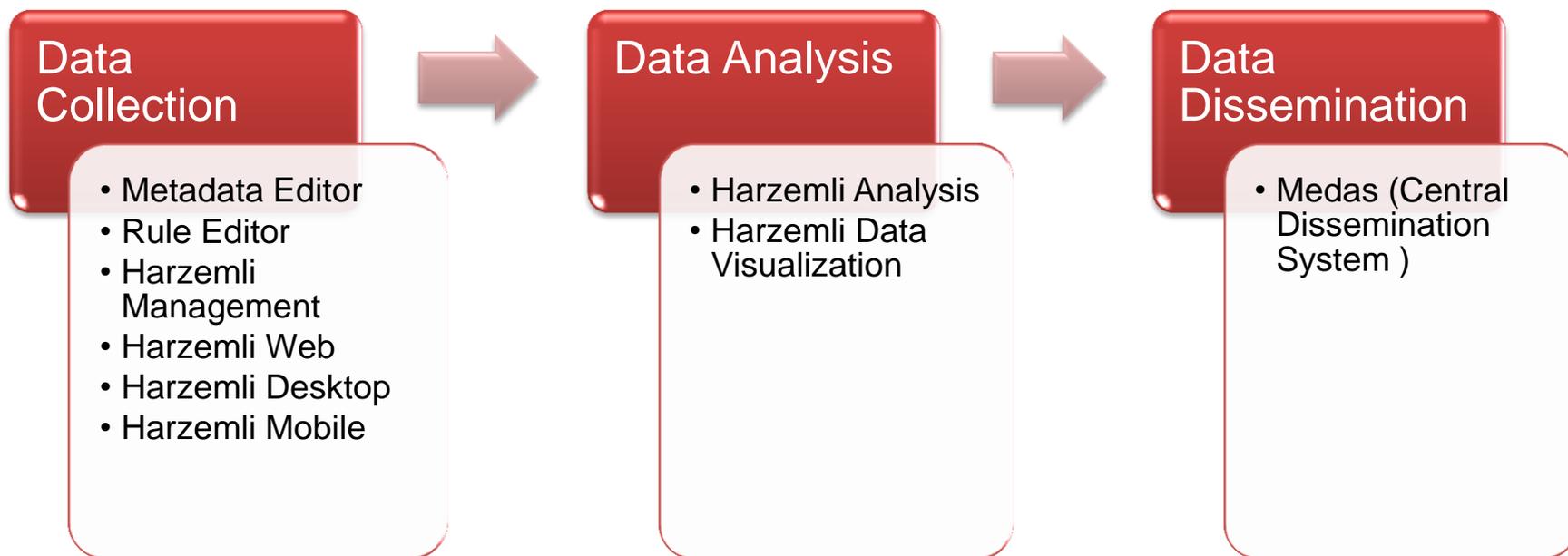


## with HARZEMLI

- ❖ No need to write new Java codes
- ❖ Similar data design for each subject
- ❖ Totally metadata-driven, automatically generated web applications
- ❖ Shorter period of time for the completion of electronic data entry, since there is no paper

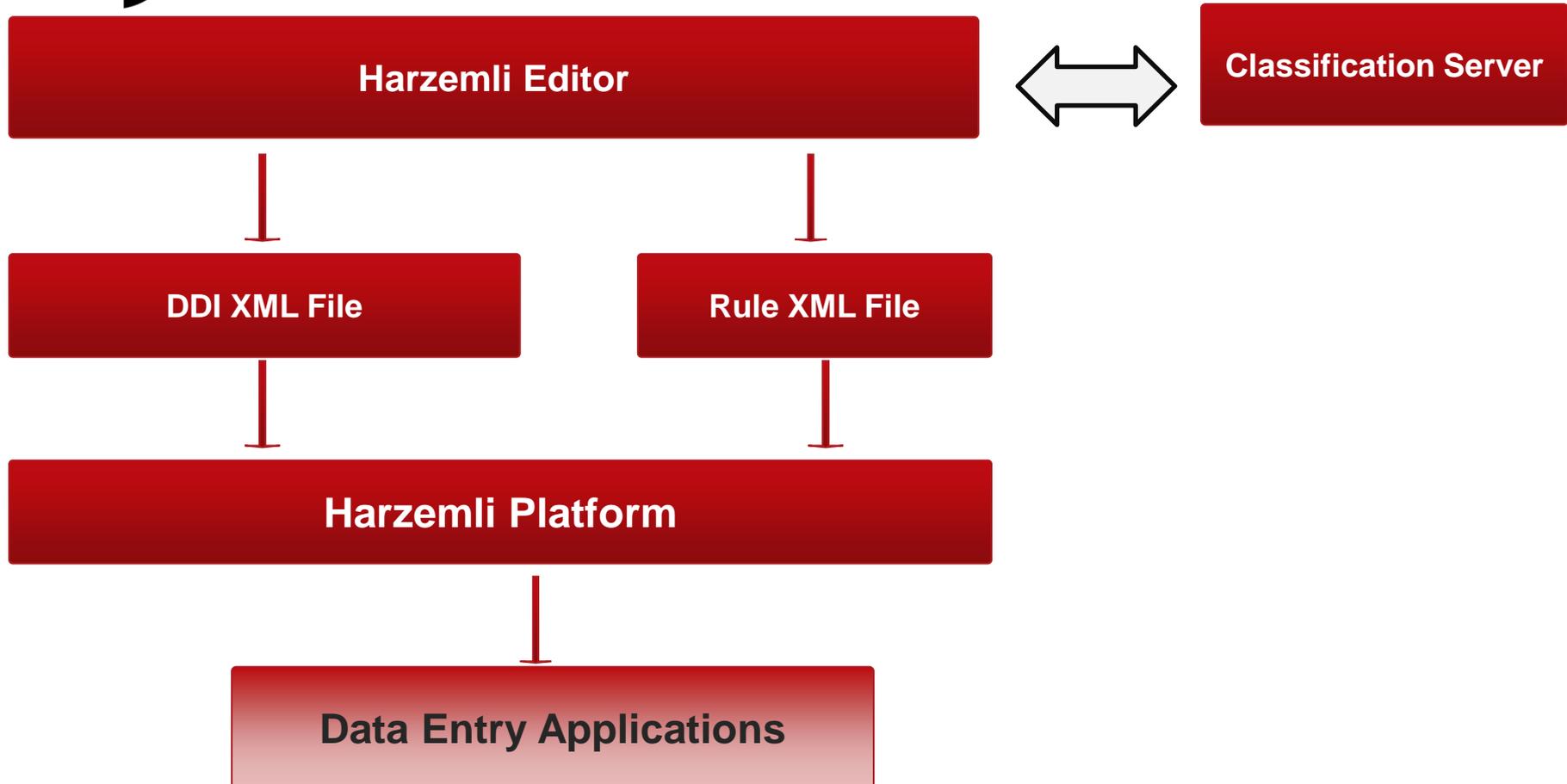


# Harzemli Platform System Components





# Harzemli Platform





## Harzemli Platform Milestones

	Milestones of the project	Development dates
1	Harzemli Desktop	2012
2	Harzemli Rule Editor	2012
3	Harzemli Management Console	2012
4	IDM	2013
5	Harzemli Web	2013
6	MEDAS	2014
7	Harzemli Mobile	2014
8	Harzemli Analysis	2014
	Harzemli Editor	2015

	Harzemli Desktop	Harzemli Web	Harzemli Mobile	TOTAL
TOTAL	19	90	10	119

## PRODUCTIVITY GAINS (Time)

- ❖ **Decreased time for software engineers to develop data entry applications**

4 WEEKS → 1 WEEK

- ❖ **Decreased time for data collection**

8% decrease in data collection time

50% increase in time available for regional offices to analyze their data, thanks to instant access to data

12% decrease in the analysis time that is necessary for the staff of central office.

Time period necessary to prepare the press releases has been shortened. For example, the time period that is necessary for the preparation of the monthly Labor Statistics press releases has been shortened by 4 days.

## PRODUCTIVITY GAINS (Quality)

- ❖ **Software Process Standardization**
- ❖ **Data Integrity**
- ❖ **Common code development**
- ❖ **Common Codes Available**

## PRODUCTIVITY GAINS (Costs)

- ❖ **870 trees would be cut to produce 10 Million A4 papers only in 2015 if the paper editions of surveys had continued.**
- ❖ **58% reduction in the cost of pollsters' travelling expenses**

# MEDAS (Central Dissemination Project)

## ❖ Dissemination System of Harzemli Platform

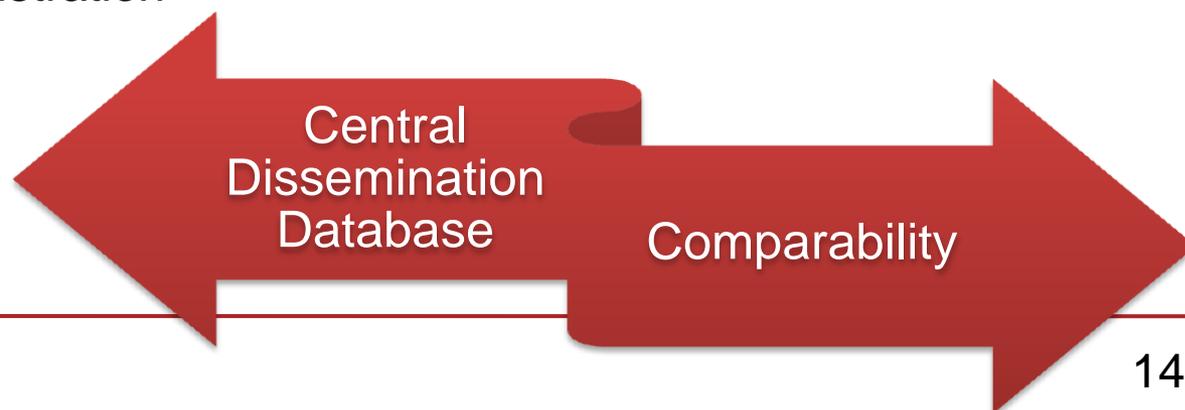
### Before MEDAS;

- ❖ Different database designs and applications for each subjects (62)
- ❖ Lack of standard codes
- ❖ No data integrity, hard to detect correlations
- ❖ So many manual processes
- ❖ Security threats because of old technology

**MEDAS** is in use since April 2014

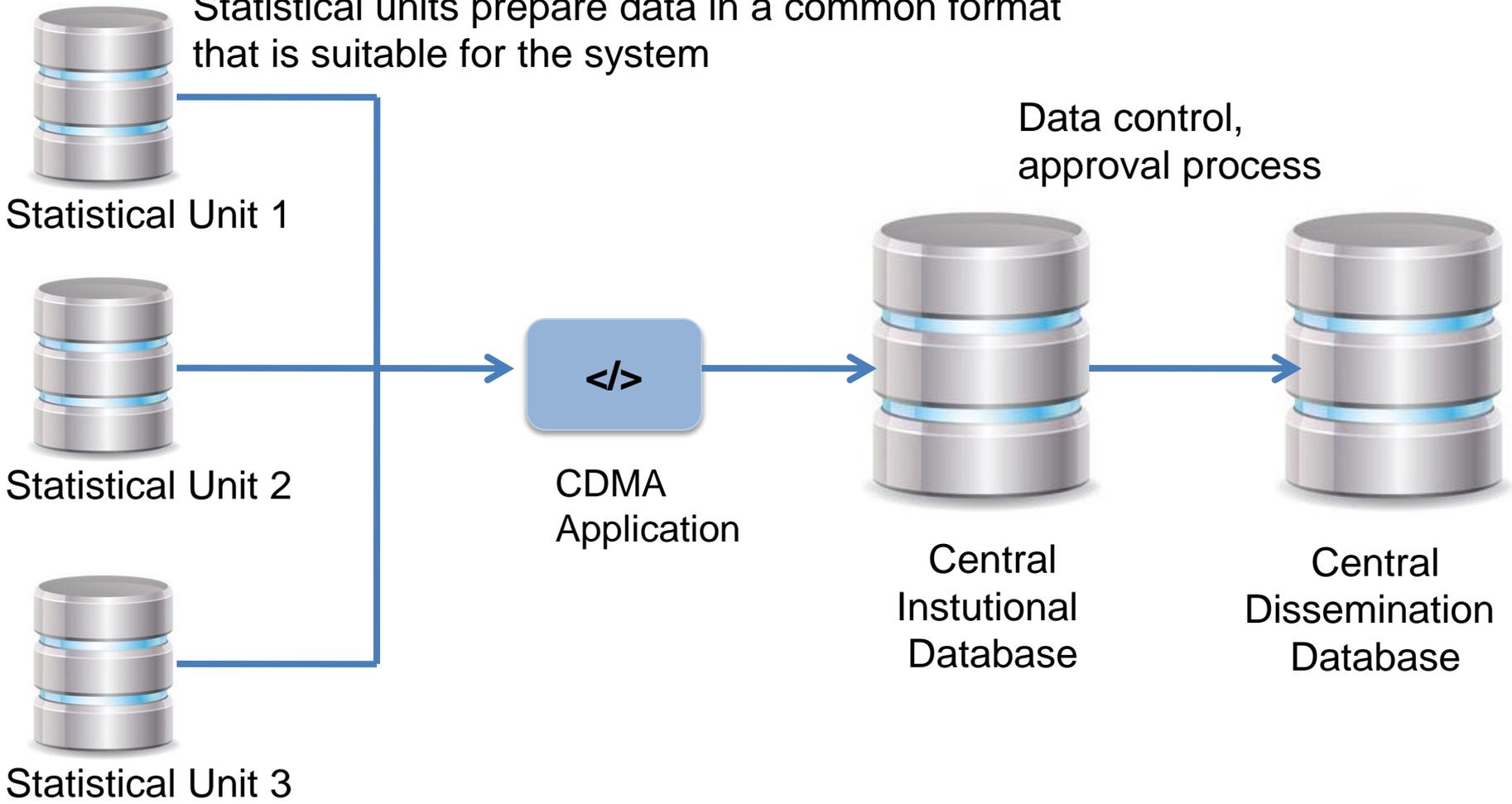
# MEDAS

- ❖ Dissemination of different statistical subjects  
through generic data model - single data source and single application
- ❖ Reduced reporting burden thanks to **single** application
- ❖ Modern pivot tables
- ❖ Enables to compare any number of subjects in the **same report**
- ❖ Easy to develop **web services** thanks to generic data model
- ❖ Reduction in person-dependency => good for managers
- ❖ Easier database administration



# Data Process of MEDAS

Statistical units prepare data in a common format that is suitable for the system



# MEDAS

## ❖ MEDAS Report Screen (Different subjects are given on the same report)

CSV XLS

You can move different variables of the report between rows and columns.

**Row**

Year	Dimension
Foreign Trade Indices	Cinema Statistics
Number of population	

**Column**

Region
Period
Measurement
Month

Columns				
Rows	Turkey			
	Export Volume Index	Import Volume Index	Number Of Audience	Population
2007	91.3	98.9	20,659,569	70,586,256
2008	97.3	97.6	31,132,231	71,517,100
2009	89.7	84.9	31,334,447	72,561,312
2010	100	100	35,787,380	73,722,988
2011	106.2	112.9	37,439,786	74,724,269
2012	123.9	114.1	39,002,190	75,627,384
2013	122.63	122.61	45,077,509	76,667,864
2014	129.36	122.36	55,378,716	77,695,904

## FINAL WORDS

- ❖ So far, Harzemli Platform has had great success and has seen great support by both the presidency and staff from the units.
- ❖ Harzemli Platform is going to enlarge by the new modules that are currently being developed to be added in the near future.

**Thank you**

**Murat TUNÇEL**

**Head of Information Technologies Department**

**[murat.tuncel@tuik.gov.tr](mailto:murat.tuncel@tuik.gov.tr)**