

# A modern Job Submission Application to Manage the Bulk of Secure Outputs

Innovations in Managing Secure Outputs: What's the Takeaway?

IASSIST

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- Who are we?
  - part of the Institute for Employment Research (IAB), which belongs to the Federal Employment Agency (BA)
- What do we do?
  - access to confidential micro data of BA/IAB for academic purposes
  - standardized data products
  - Advice for data selection and application
  - documentation (web based metadata information platform - coming soon)
  - do own research with our data
- Why do we provide data?
  - Legal mandate specified in German Social Act

## Data

- Micro labor market data on individuals, households, and establishments
  - Administrative data (social security notifications, process-generated data of the BA)



- Surveys
- Linked data

## Data Access

**Campus File,  
Scientific Use File**

↓ Download



**On-Site Use**

**Remote Execution**

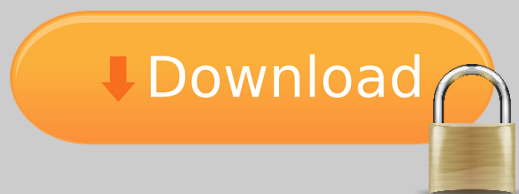


**FDZ**

## Data Access



## Campus File, Scientific Use File

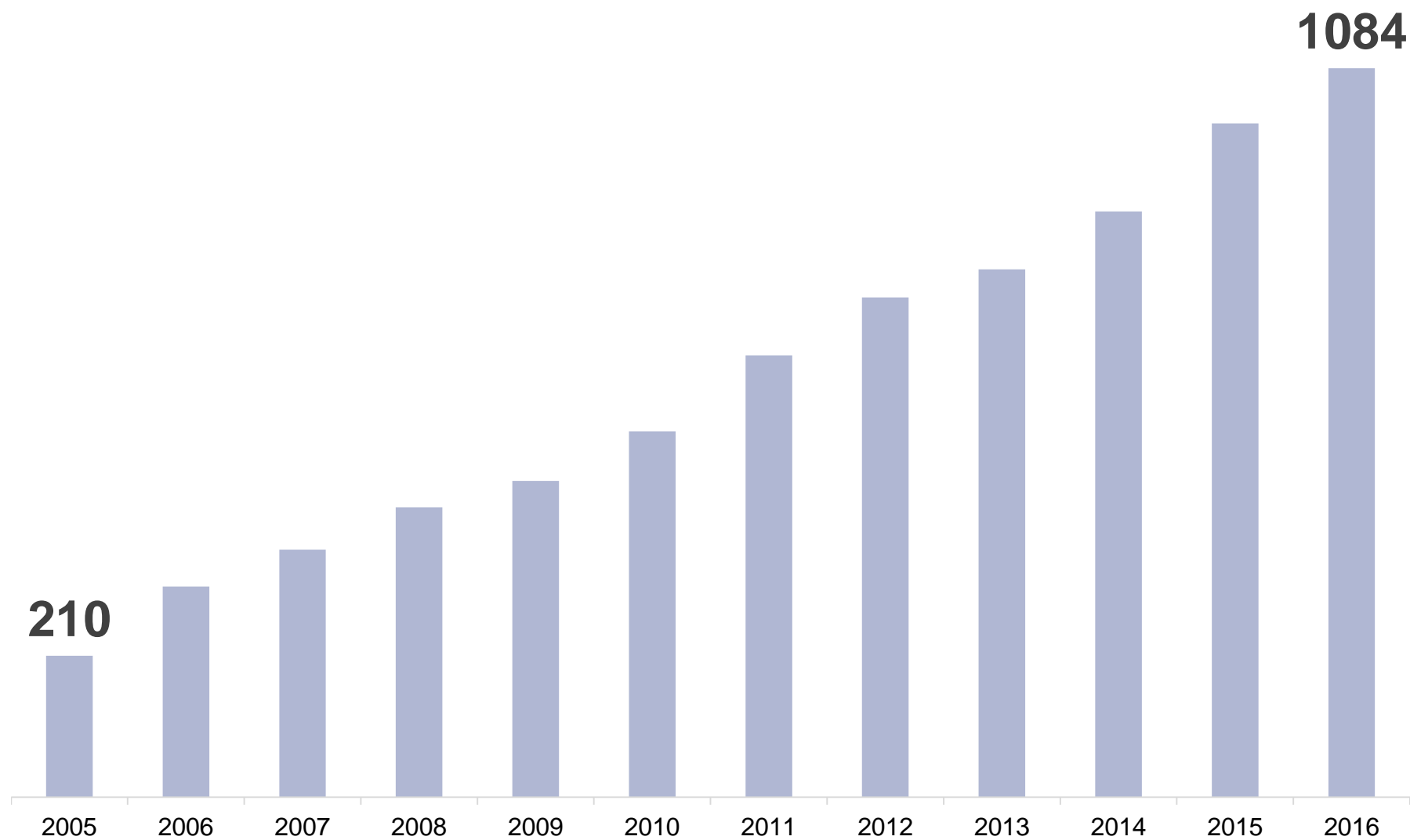


## On-Site Use

## Remote Execution

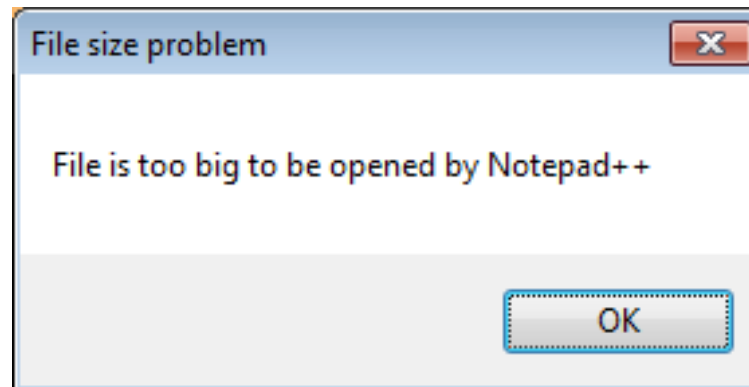


## Number of Users



## On-Site Use/Remote Execution

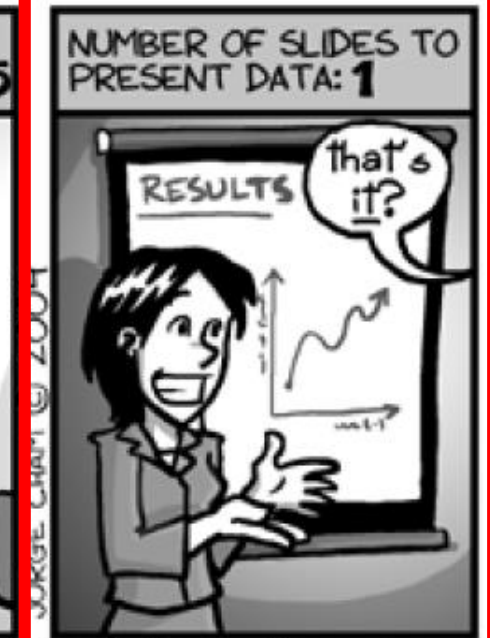
- Concerns nearly half of our users
- 2014: 1,800 jobs of remote data processing
- Output checking:
  - Guidelines for users about how to prepare the do-files
  - Delete less then 20 observations
  - Script for output control (specific stata commands)
  - Rotation team



# Research Process

weeks

## DATA: BY THE NUMBERS



www.phdcomics.com



## The Decision



**Login**



Username:

Password:

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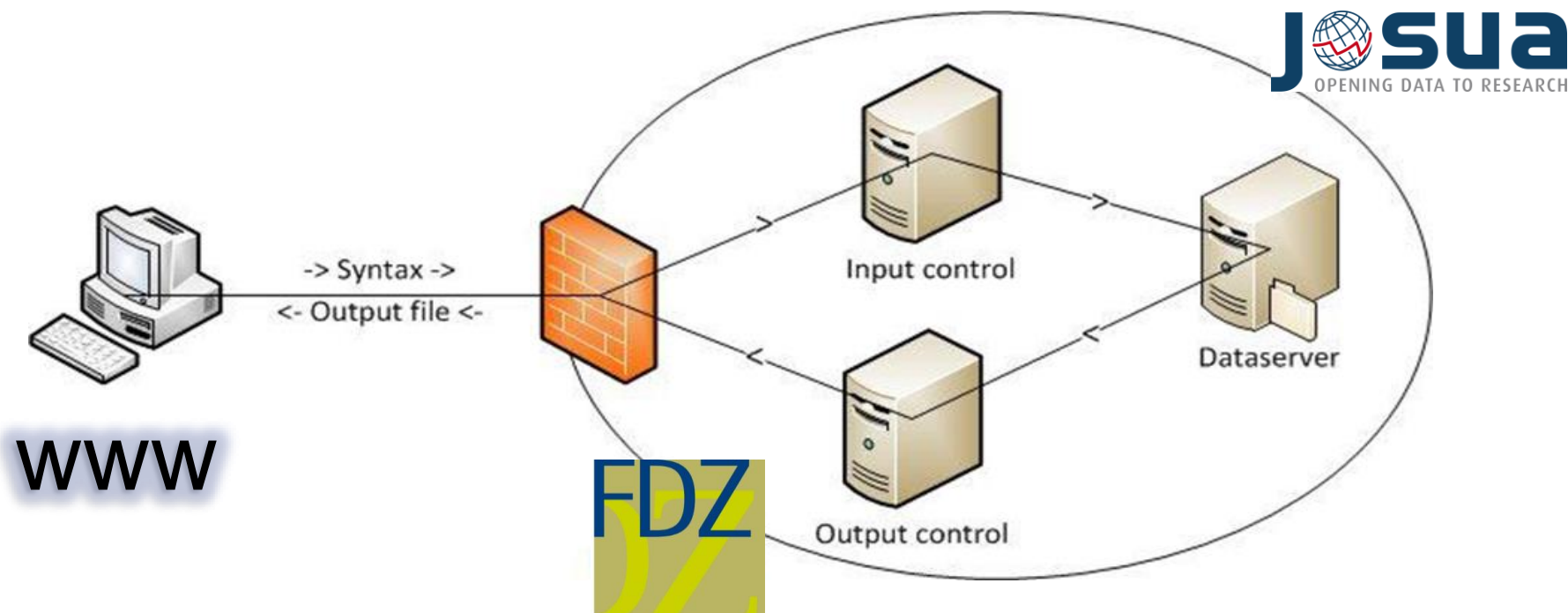
Login

<https://josua.iab.de>

## JoSuA: Job Submission Application

- Application to automate remote data processing developed by the Institute of Labor Economics (IZA)
- Adapted version implemented at FDZ in April 2015
- Two job modes
  - „internal use“; output automatically reviewed; appears directly on the screen; **must** not be extracted.
  - „publication/presentation“: output is reviewed by FDZ staff; can be extracted after review.

## Remote data processing with JoSuA



- Researchers submit jobs via web interface
- Jobs are automatically picked up and processed on statistical software
- Results are transferred back to the web interface
- Provision of output after disclosure review

# Screenshot Tour

## Part I: Job Submission Window



My Jobs Projects Job Submission You are: **doej9999**

▼ Web Submission

FDZ9999

Stata13

Internal Use  
Presentation / Publication

*Additional Comment  
only available for  
Presentation /  
Publication*

Submit Job

No files have been selected

Choose the files you wish to upload.

# Screenshot Tour

## Part II: Jobs



My Jobs Projects Job Submission You are: **doej9999** 🔑 ? ⏻

Job List (Last 50)








Job ID	Type	Sent in	Project	Status	Censoring	Options
13194	Internal	2017-01-20 10:31:01	FDZ9999	success	released	🔍
13181	Internal	2017-01-19 17:40:46	FDZ9999	success	released	🔍
13179	Presentation	2017-01-19 17:18:45	FDZ9999	success	released	🔍
12701	Internal	2017-01-03 16:23:43	FDZ9999	failed	released	🔍
12079	Presentation	2016-12-06 15:35:15	FDZ9999	success	released	🔍
12078	Presentation	2016-12-06 15:26:05	FDZ9999	success	released	🔍
12077	Presentation	2016-12-06 15:21:40	FDZ9999	success	released	🔍
12076	Presentation	2016-12-06 15:13:05	FDZ9999	success	released	🔍
12073	Presentation	2016-12-06 14:00:40	FDZ9999	success	released	🔍
11120	Presentation	2016-11-03 15:05:31	FDZ9999	success	released	🔍
9668	Internal	2016-09-07 13:19:48	FDZ9999	success	released	🔍
9667	Internal	2016-09-07 13:11:33	FDZ9999	success	released	🔍
9389	Internal	2016-08-26 09:13:08	FDZ9999	success	released	🔍
9369	Internal	2016-08-25 13:21:06	FDZ9999	failed	released	🔍
9205	Internal	2016-08-19 16:30:08	FDZ9999	success	released	🔍
8728	Internal	2016-07-29 10:53:58	FDZ9999	failed	released	🔍
8727	Internal	2016-07-29 10:38:57	FDZ9999	success	released	🔍
8726	Internal	2016-07-29 10:35:41	FDZ9999	success	released	🔍
8725	Internal	2016-07-29 10:35:19	FDZ9999	failed	released	🔍
8724	Internal	2016-07-29 10:32:54	FDZ9999	failed	released	🔍
8723	Internal	2016-07-29 10:30:49	FDZ9999	failed	released	🔍

# Result Window for Internal Use Mode




## Output Files

Search: <input type="text"/>			
Name ▲	Status ▼	Size ▼	Options
<u>01_descriptives.log</u>		7.2 KB	🔍
<u>02_analyses.log</u>		1.7 KB	🔍
<u>master.log</u>		452 B	🔍
Showing 1 to 3 of 3 entries			

## Output Files

master.log-1...
01 descriptive...
01 descriptive...
01 descriptive...
01 descriptive...
01 descriptive...
01 descriptive...

01 descriptive...
01 descriptive...
02 analyses.l...

# Result Window for Internal Use Mode

OUTPUT CREATED BY DoeJ9999 ON 2016-09-07 13:19:48 FOR PROJECT FDZ9999

```
. sysuse lifeexp, clear
(Life expectancy, 1998)
```

```
. tabulate region, gen(d_region)
```

Region	Freq.	Percent	Cum.
Eur & C.Asia	44	64.71	/
N.A.	/	/	/
S.A.	/	/	/
Total	68	100.00	

```
. summarize d_region*
```

Variable	Obs	Mean	Std. Dev.	Min	Max
d_region1	68	.6470588	.4814377	0	1
d_region2	/	/	/	/	/
d_region3	/	/	/	/	/

```
. summarize lexp, d
```

Life expectancy at birth				
Percentiles	Smallest			
1%	/	54		
5%	/	/		
10%	/	/	Obs	68
25%	/	/	Sum of Wgt.	68
50%	73	Mean		
		Std. Dev.		
75%	/	Largest		
90%	/			
95%	/	Variance		
99%	/	Skewness		
		Kurtosis		

```
. log close
name: <unnamed>
log: C:\Josua\Output\51061\logfile.log
log type: text
closed on: 7 Sep 2016, 13:19:19
```

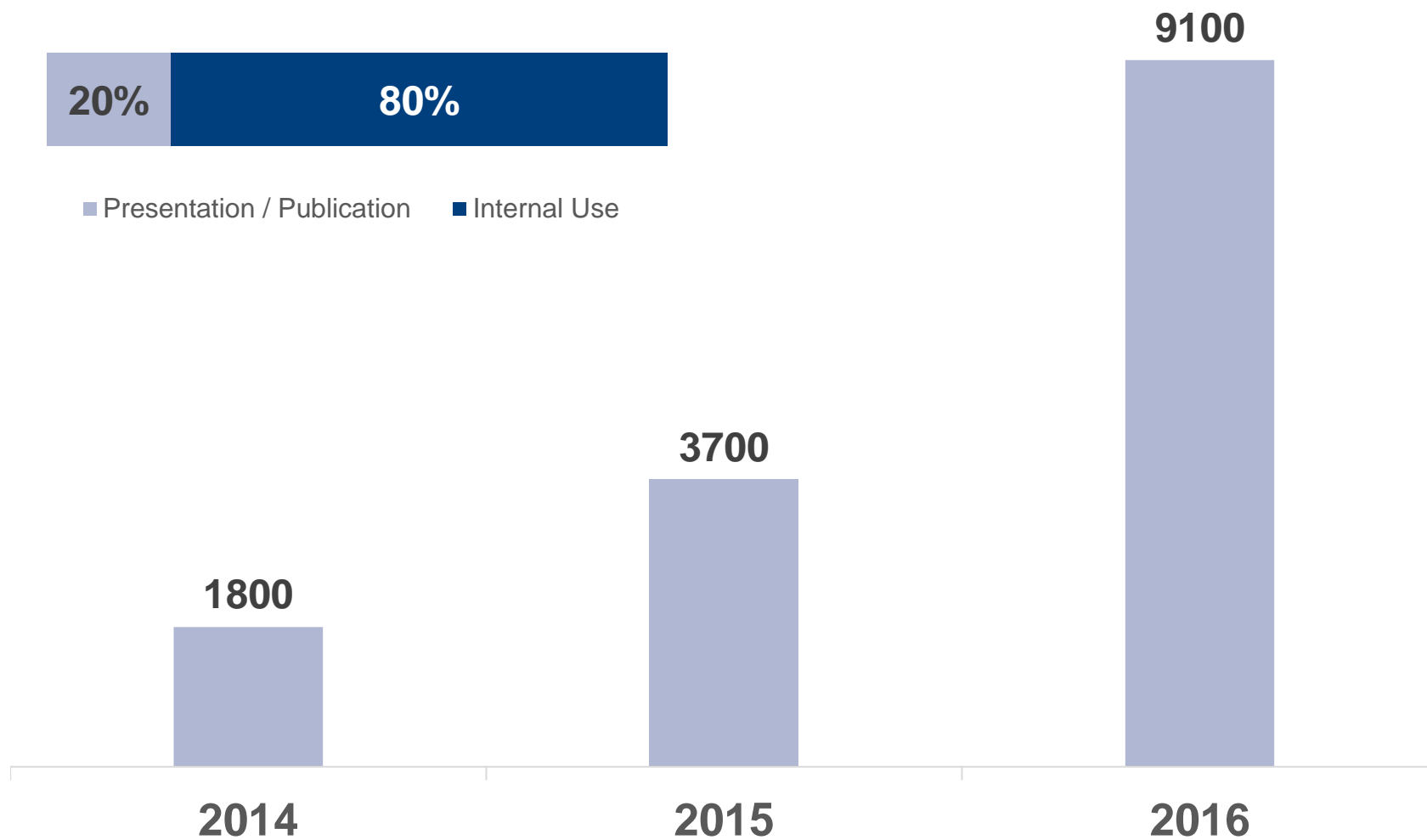


## Large Output not Possible

[illegible]



## Number of Jobs



## Conclusions and next steps

- Advantages of JoSuA
  - Automate remote data processing
  - Application to start jobs, review output, send messages in one application
  - Minimized the output review
  - Speed-up of the research process
  - Internal Use mode is a useful supplement (but not replacement) to on-site use
- Ongoing developments on the script
  - Dependence on software that displays output in a standardized way
- User Trainings on data handling

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