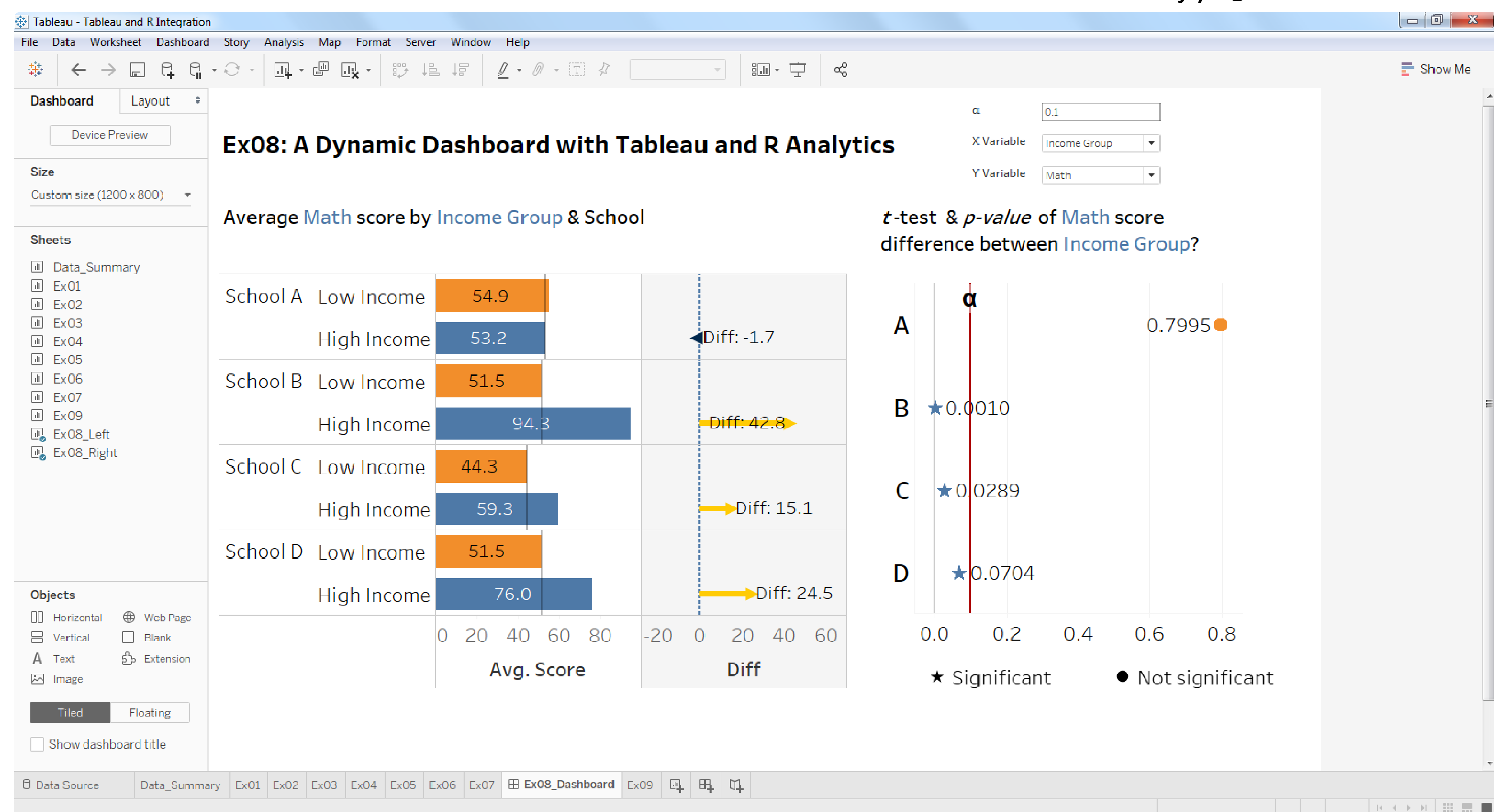


Before Tableau & R Integration

Features	Tableau	R
Data Visualization	<u>Dynamic</u> <ul style="list-style-type: none"> Interactive User-friendly Drag & drop 	<u>Static</u> <ul style="list-style-type: none"> Not interactive Not user-friendly Spaghetti codes
Statistics	<u>Limited</u> <ul style="list-style-type: none"> Basic descriptive stat. Trend line (simple regression) 	<u>Abundant</u> <ul style="list-style-type: none"> Various advanced stat. packages
Functions	<u>Limited sets</u> <ul style="list-style-type: none"> Limited flow controls No looping, iteration No user-def. functions 	<u>Various options</u> <ul style="list-style-type: none"> Iterative functions Matrix manipulations User-def. functions Vectorization



Simple Steps to Integrate

1. Download & Install R <https://cran.r-project.org/>
2. Run R Console RGui.exe
3. Install Rserve > install.packages("Rserve")
4. Load Rserve > library("Rserve")
5. Start Rserve > Rserve()

Script Functions per
output data type

```
SCRIPT_INT( )
SCRIPT_REAL( )
SCRIPT_STR( )
SCRIPT_BOOL( )
```

Tableau R Script Syntax

SCRIPT_REAL (

Quote
the R code
as a string

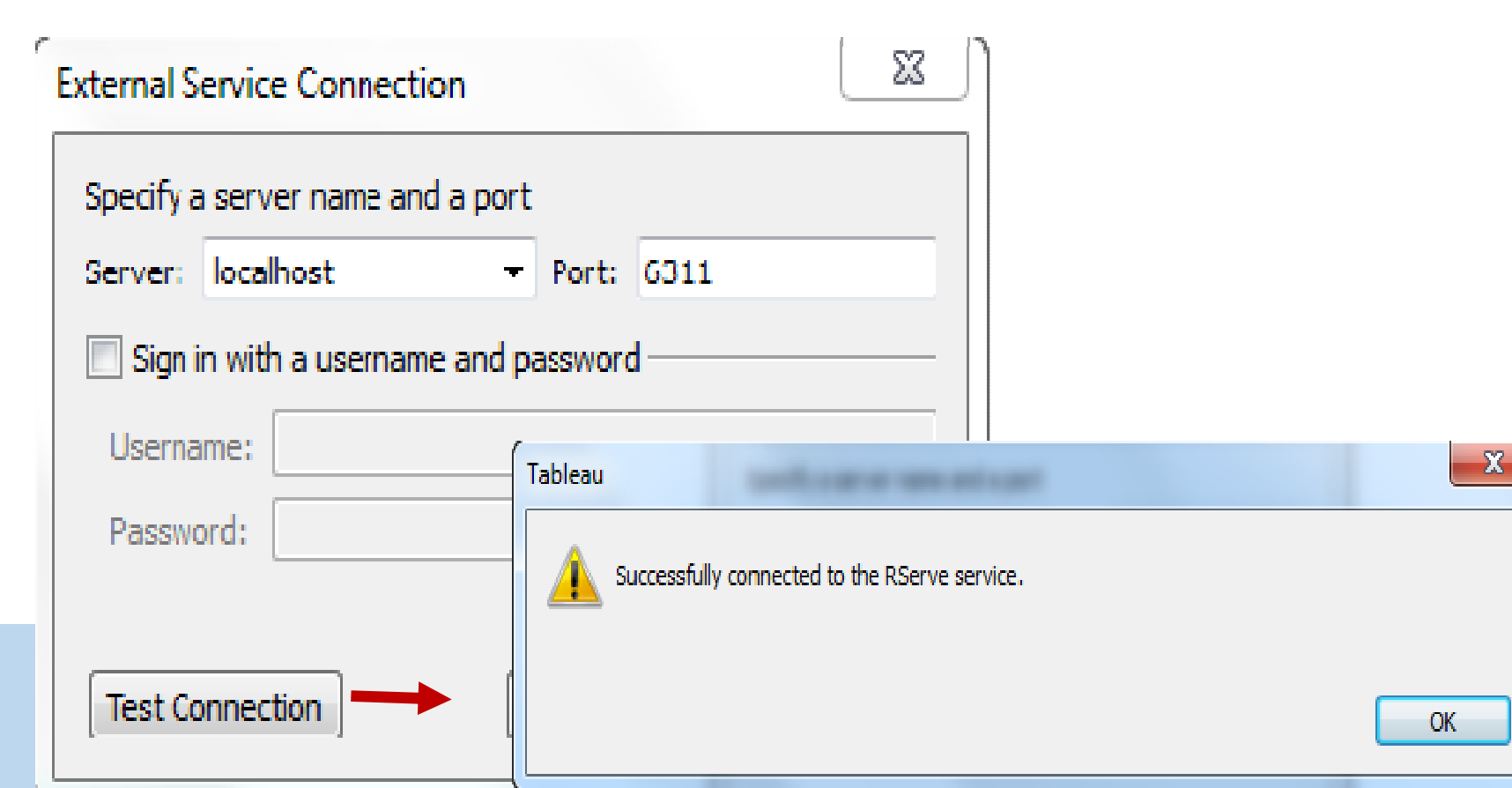
Put your R script here.
Input variables are as .arg1, .arg2, .arg3, etc.
Script can be in multiple lines and steps
Put the returning value(s) at the last line

Input
Parameters

```
, SUM([ Variable 1 ])
, MAX([ Variable 2 ])
, ATTR([ Variable 3 ])
... # more input variables (or arguments) )
```

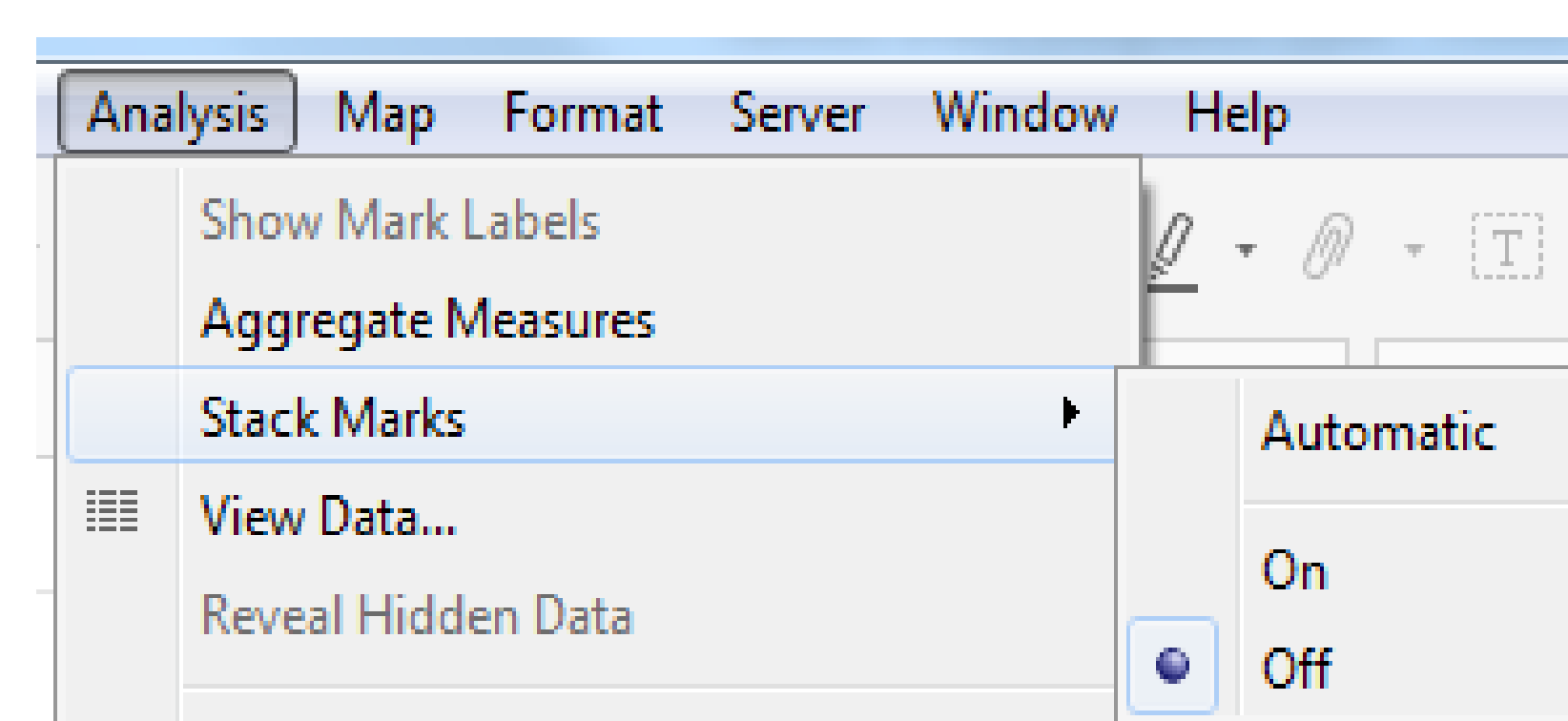
Connect Tableau to Rserve

On Tableau Desktop,
Help > Settings and Performance
> Manage External Service Connection



Configure Tableau Worksheet

Analysis > Aggregate Measures un-checked
Analysis > Stack Marks > Off



Benefits of Tableau & R Integration

1. R allows Tableau to do advanced statistics that Tableau cannot usually do. R can create special data points to achieve visual effect in Tableau
2. Tableau can visualize R analytics interactively and dynamically
3. The well-designed R script can run statistics for different data measures, sub-groups, dimensions, or answer a set of scenario questions without modification.
4. Complicated and iterative calculations can be handled by user-defined functions in R.
5. Tableau's data Scheduler can retrieve a new dataset and make new R analytics immediately available.
6. IR professionals become more productive because the integrated reports are more efficient, versatile, convincing, and promote greater usability.

Download sample files at
1. AIR forum web app, or
2. GitHub (Scan the QR Code)

