

# An introduction to R software environment

## Part 2

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### **RISIS Winter School**

**Tools and methods for analysing complex Science, Technology and Innovation (STI) systems: A gentle introduction to Network Science (NS), Spatial Models (SM) and Machine Learning (ML)**

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## 1 Basics of programming with R

- If else statement
- Loop

## 2 Writing own functions

## If else logic

Chunk 1: "IF statement is true THEN do something"

Chunk 2: "IF statement is true THEN do something OTHERWISE do something ELSE"

Chunk 3: "A more complex IFELSE statement with *ggplot* and T-Student test"

## Loop logic: the cursor

Chunk 1: "for"

Chunk 2: "repeat"

Chunk 3: "while"

## Two simple functions

Chunk 1: "From inches to cm"

Chunk 2: "Outliers"

## Comfort break (5 minutes)

Last part (17.05 - 17.30)

- Grouping and summarizing data: the **dplyr** package