

# Project results

- ★ Teach practical tools of data literacy and causal analysis
- ★ Encourage & support DCL participants to start their own learning journey
- ★ Causal case studies and development of data products

## An innovative course on causality

We created a hybrid course on causal inference, which teaches students **theoretical basics** of causality and **practical skills** of data literacy

## Causality apps

We develop **applications** that illustrate key concepts and topics of causal inference



Apps help students to better understand the theoretical concepts from the lecture

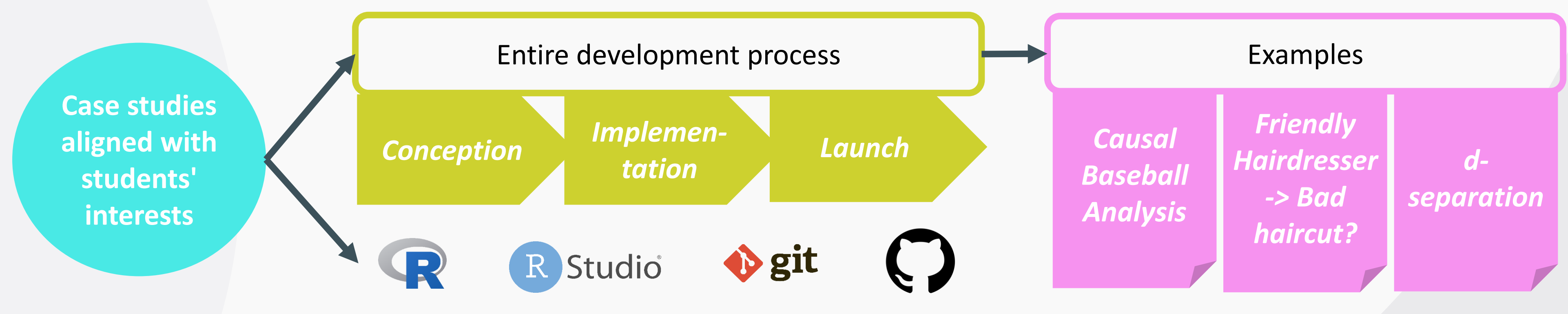
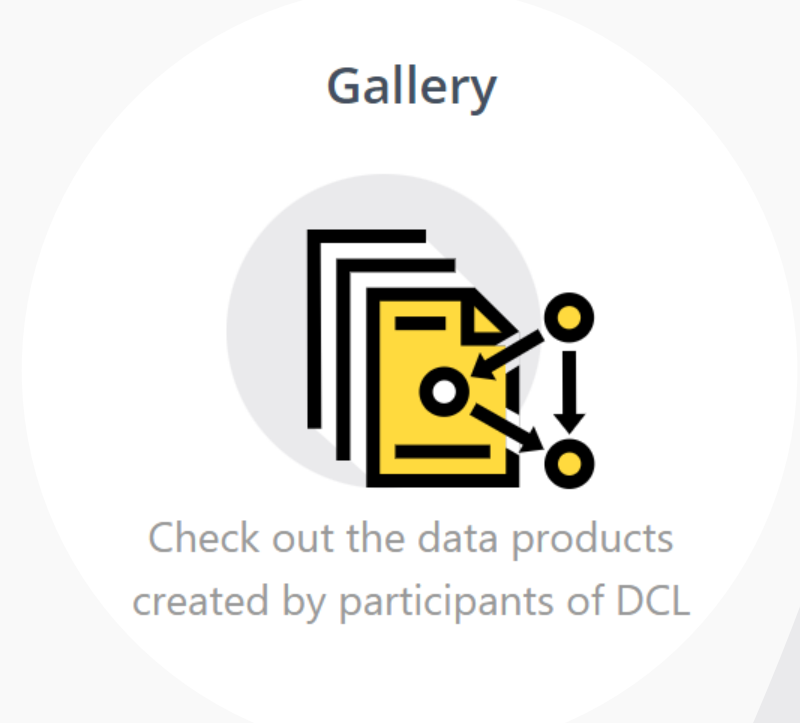
Focus: Bridge the gap between theoretical concepts and data applications.

The source code is hosted on GitHub and publicly available

serve as examples for the data products that students develop in the course

## The Digital Causality Lab

The participants work independently on business-related **case studies** and develop **data products**



- Goals of Digital Causality Lab
- ★ Create an innovative course on causal inference
  - ★ Teach data literacy in the context of causality
  - ★ Increase the interest of business students in causal analysis
  - ★ Get students involved in development of data products

## Principles of DCL

### 1 Teach how to learn



We **encourage** and **assist** participants of the DCL in **learning** and **applying** important data literacy skills and tools for analyzing and processing data.

The students themselves decide which tools might help them and to what extent they are relevant to their projects.

### 2. Offering a playground for causality



We communicate important concepts of causality in an interactive way. Participants explore core concepts of causal inference in a playful manner.

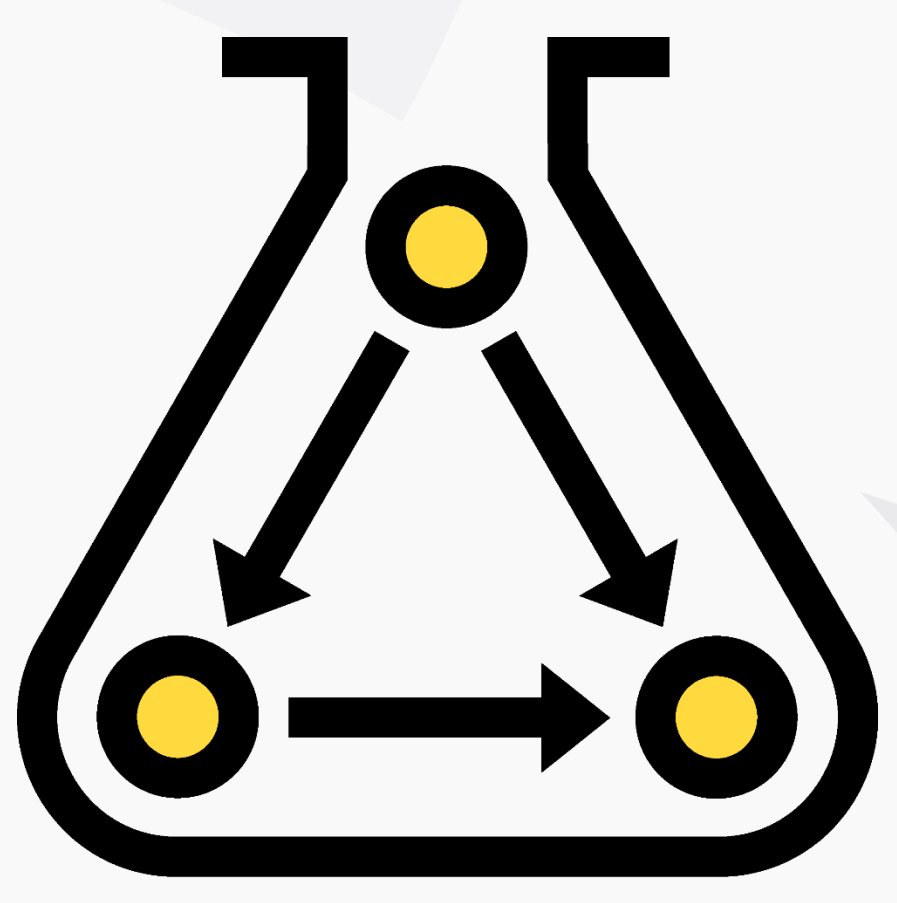
This is why we develop **interactive apps** that enable users to experiment and engage with important causal concepts, just as they would in a playground.

### 3. Open Source



We believe that everyone is benefitting from exchange with others. Learning is much easier when resources are publicly available. If code is involved, a lot can be learned from reading the source code.

This is why we **publish** our teaching materials like our apps and the participants' data products on GitHub.



# DIGITAL CAUSALITY LAB

Causality as the Key to Intelligent Data Analysis

## Main learnings

- 😊 Conception and realization of didactic and technical framework
- 😊 Students have fun in learning and active development of data products
- 😊 Students benefit from motivation, explanation and structure
- 😊 Teachers relinquish control, provide assistance when necessary, allowing ample room for experiments, frustration and learning successes
- 😊 Motivation and organization can be more challenging for students than technical aspects of implementation

## Outlook

- 📌 Integration in regular curriculum
- 📌 Phase 2: Fully digital MOOC for Studium Generale
- 📌 Maintain an open-source ecosystem on GitHub: Apps, teaching materials, data products
- 📌 Continuous development of apps and teaching materials

