The seven-step **de**ductive research process

Theory	→	Data

7 Write-up

6 Analyze data

5 Collect data

4 Choose a research design

3 Develop a theoretical framework

2 Formulate the problem statement

1 Define the business problem
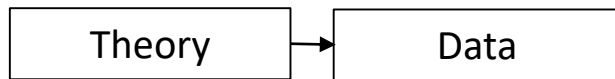
The seven-step **in**ductive research process

Data → Theory

7 Develop theory

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5 Collect data

4 Choose a research design

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2 Formulate the problem statement

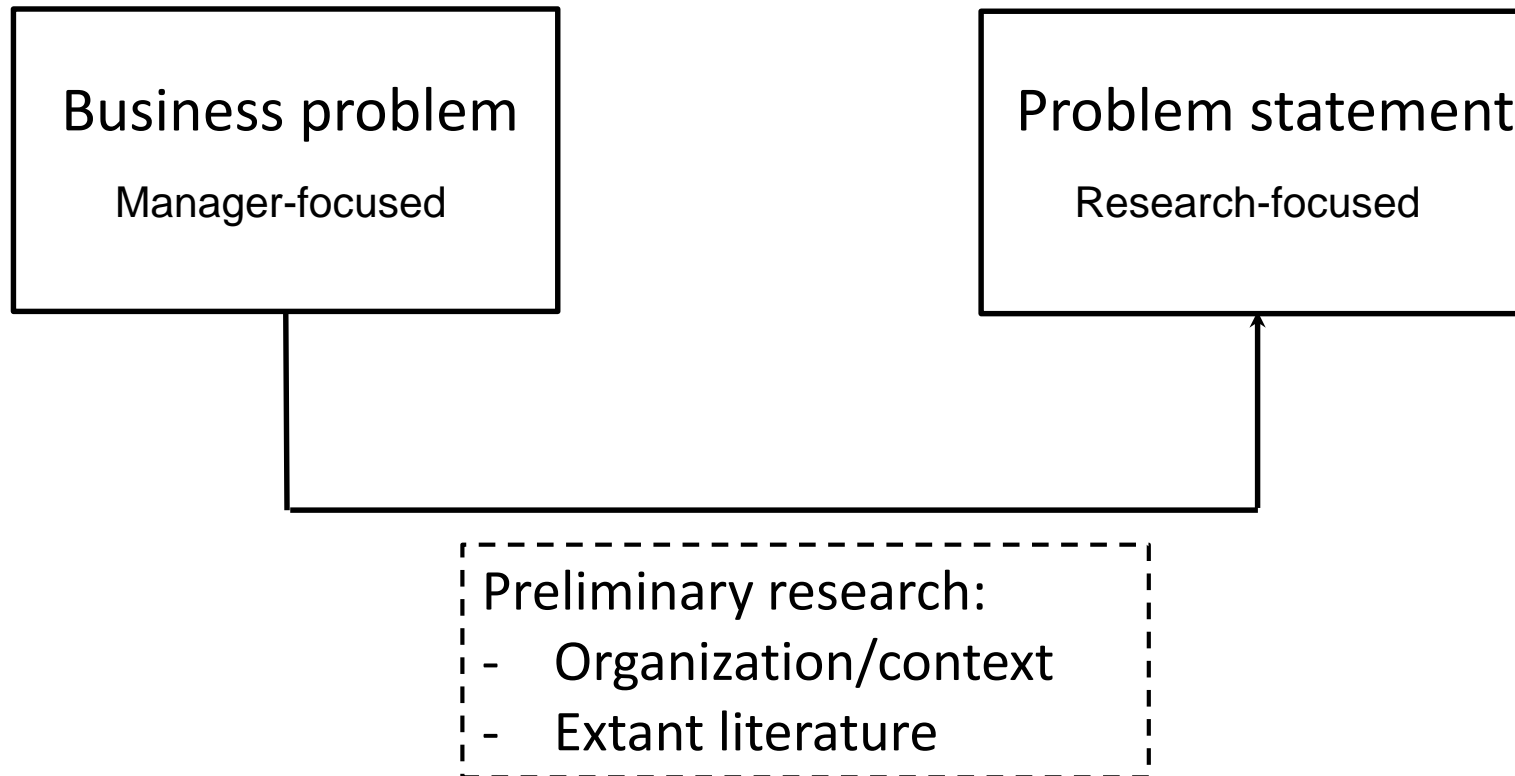1 Define the business problem
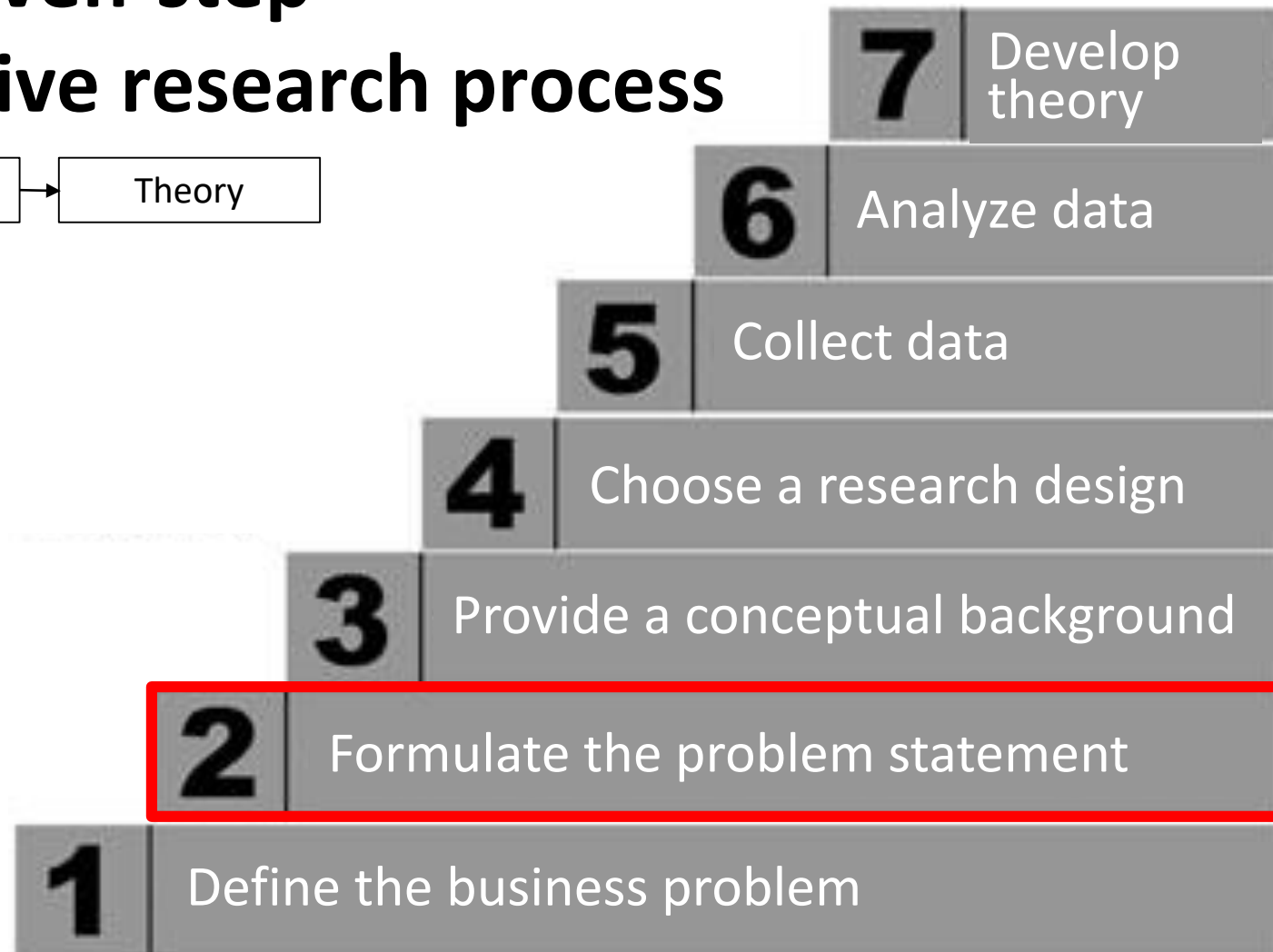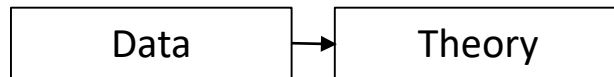
Agenda

- What makes a good problem statement?

- What makes good research questions?

1. What makes a good problem statement?

From business problem to problem statement

```
┌─────────────────────┐              ┌─────────────────────┐
│  Business problem   │              │  Problem statement  │
│                     │              │                     │
│   Manager-focused   │              │   Research-focused  │
└─────────────────────┘              └─────────────────────┘

        ┌─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┐
        │ Preliminary research:           │
        │ -   Organization/context        │
        │ -   Extant literature           │
        └─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─┘
```

Example

- Business problem:

Ahold and Delhaize have merged. Several employees of Delhaize have taken on an unmotivated attitude. Ahold-Delhaize would like to know whether communication by the CEO can help to increase employee morale.

- Problem statement:

To what extent does the CEO's communication style after the merger increase employee morale, and to what extent does this effect depend on employees' pay package?

What makes a good problem statement?

☐ Formulated in terms of

    ☐ variables, and

    ☐ relations

☐ Open-ended question

☐ Stated clearly/unambiguously

[Is managerially and academically relevant]

Example

- Problem statement:

To what extent does the **CEO's communication style** after the merger increase **employee morale**, and to what extent does this effect depend on **employees' pay package**?

☐ Formulated in terms of
   ✔ **variables**, and
☐ relations
☐ Open-ended question
☐ Stated clearly/unambiguously
[Is managerially and academically relevant]

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Example

- Problem statement:

To what extent does the CEO's communication style after the merger **increase** employee morale, and to what extent **does this effect depend on** employees' pay package?

☐ Formulated in terms of
   ☐ variables, and
   ☑ **relations**
☐ Open-ended question
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[Is managerially and academically relevant]

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Example

- Problem statement:

To what extent does the CEO's communication style after the merger increase employee morale, and **to what extent** does this effect depend on employees' pay package?

☐ Formulated in terms of
  ☐ variables, and
  ☐ relations
☑ **Open-ended question**
☐ Stated clearly/unambiguously
[Is managerially and academically relevant]

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2. What makes good research questions?

What makes good research questions?

☐ Should <u>collectively</u> address the problem statement

☐ First theoretical, then practical research questions

    – In the same order as they will be addressed in your research report!

☐ Stated clearly/unambiguously

Theoretical research questions

- Context question *(e.g., "What is …")*
  - Only if context needs elaboration

- Conceptualization question(s) *(e.g., "What is …")*
  - Only for the key variable(s) that need(s) elaboration

- Relationship questions *(e.g., "Which variables …";*
  "How does … affect …"
  "How does the effect of … on … depend on …")
  - All relationships in the problem statement should be covered

Theoretical research questions: Example

- Problem statement:

To what extent does the CEO's communication style after the merger increase employee morale, and to what extent does this effect depend on employees' pay package?

- Theoretical research questions:

  - What is the effect of a merger on employee morale?

  - Which different communication styles can be used by a CEO after a merger?

  - How does a CEO's communication style after a merger influence employee morale?

  - How does the effect of CEO communication style on employee morale after a merger depends on employees' pay package?

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Practical research questions

- Relationship questions *(e.g., "To what extent …")*

  – To what extent does X affect Y?

  – What is the (relative) magnitude of the relations?

- Implication question

  – How can practitioners implement your results?

  – Open question

Practical research questions

- Theoretical research questions:

  - What is the effect of **a** merger on employee morale?

  - Which different communication styles can be used by **a** CEO after **a** merger?

  - How does **a** CEO's communication style after **a** merger increase employee morale?

  - How does the effect of CEO communication style on employee morale after **a** merger depend on employees' pay package?

- Practical research questions:

  - To what extent does **the** CEO's communication style after **the Ahold-Delhaize** merger increase employee morale?

  - To what extent does the effect of CEO communication style on employee morale after **the Ahold-Delhaize** merger depend on employees' pay package?

  - Does CEO communication after **the** merger help **Ahold-Delhaize** to increase employee morale, and should the same communication style be used for employees with different pay packages?

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Final notes

- The problem statement is the general question you try to answer in your research.

- Research questions help to answer the 'overarching' problem statement, step by step.

- Drawing up a problem statement and research questions is difficult and time consuming, but oh-so-important. They determine the contents and the structure of your research report.

Wise words to remember

If I were given one hour to save the world, I would spend 59 minutes defining the problem and one minute solving it.