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Image by Qwen-Image 2.1

The Sustainable Development Goals and the criteria of scientific work

FTS-02 · Future Technologies and Sustainability

Prof. Dr. Thorsten Jungmann

GUIDING QUESTIONS

- What are the Sustainable Development Goals, and how can companies and their employees contribute to achieving them?
- What makes work scientific?
- How do you take the first four steps for a question such as ‘Does hydrogen make steel production climate-neutral?’



Image by Qwen-Image 2.1

INTENDED LEARNING OUTCOMES

- You name the Sustainable Development Goals and explain how companies and their employees contribute to achieving them.
- You reproduce the 13 criteria of scientific work and explain what they require.
- You choose a question about your Sustainable Development Goal and formulate your own answer to it.
- You question an artificial intelligence (AI) service, check the sources it names and treat its output as a quotation, and you note where each statement from a scientific source comes from.



Image by Qwen-Image 2.1

AGENDA

1. Seventeen goals for one world
2. The role of companies and employees
3. Which goal will be yours? The 17 goals one by one
4. What makes work scientific? The 13 criteria
5. Steps 1 to 4 of the didactic concept
6. Your goal, your question – phase 1 step by step
7. What have you learnt today?



Image by Qwen-Image 2.1

REVIEW OF FTS-01

- Success comes from your behaviour: take part, take notes, prepare and follow up
- Systems of HSBI and tools: ILIAS, software portal, library, Word and Zotero
- Didactic concept in five steps: question, your own answer, AI answer, scientific answer, weighing up
- Phases 1 and 2: a poster each; phase 3: a term paper on a company
- Today: phase 1 begins – the goals and what makes work scientific

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1 Seventeen goals for one world

- Sustainable development and the 2030 Agenda
- Goals, targets and indicators
- The 17 goals at a glance
- Where does the world stand in 2026?
- Synergies and trade-offs

SUSTAINABLE DEVELOPMENT AND THE 2030 AGENDA

- Sustainable development meets the needs of today without endangering the chances of future generations to meet their own (WCED 1987, p. 54)
- 2030 Agenda, adopted on 25 September 2015: 17 Sustainable Development Goals (SDGs) with 169 targets (United Nations 2015, p. 1)
- Universal: accepted by all countries and applicable to all (ibid., p. 3)
- Integrated: economic, social and environmental dimensions in balance (ibid., p. 1)
- Leave no one behind (ibid., p. 1)
- Five areas: people, planet, prosperity, peace, partnership (ibid., p. 2)

GOALS, TARGETS AND INDICATORS

- Each goal is broken down into targets; each target is measured with indicators
- 169 targets; 234 indicators (United Nations 2015, p. 1; UN Statistics Division 2026)
- Example from SDG 9: cleaner industry, measured by emissions of carbon dioxide (CO_2) per unit of value added (United Nations 2026, p. 10)

Level	Example from SDG 9
Goal	SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Target	9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Indicator	9.4.1: CO_2 emission per unit of value added

- An indicator measures – it does not answer your question

THE 17 GOALS AT A GLANCE

- 17 goals, each with a number, a short name and a colour (United Nations 2023, p. 40)
- Read the official title of your goal: it states in full what the goal aims at (United Nations 2015, p. 14)



Icons: United Nations (United Nations 2023, p. 40)

WHERE DOES THE WORLD STAND IN 2026?

Assessment of the targets	Share
On track or target met	15 %
Moderate progress	21 %
Marginal progress	32 %
Stagnation	17 %
Regression below the level of 2015	15 %

- 139 targets with enough data for trends (UN DESA 2026, p. 4)
- 36 % on track or progressing at least moderately; 15 % fallen back (ibid., p. 2)
- Progress is possible – but too slow and too uneven (ibid., pp. 2–3)
- AI can support statistics, but also produce biased or inaccurate information (ibid., p. 4)

SYNERGIES AND TRADE-OFFS

Score	Type	Meaning
+3	Indivisible	Progress on one target automatically brings progress on the other.
+2	Reinforcing	Progress on one target makes progress on the other easier.
+1	Enabling	Progress on one target creates the conditions for progress on the other.
±0	Consistent	There is no significant link between the two targets.
−1	Constraining	Progress on one target limits the options for achieving the other.
−2	Counteracting	Progress on one target makes progress on the other more difficult.
−3	Cancelling	Progress on one target automatically harms the other.

- Goals are ‘integrated and indivisible’ (United Nations 2015, p. 1)
- Synergy: progress on one goal supports another
- Trade-off: progress on one goal gets in the way of another
- Seven types of interaction (Nilsson et al. 2018, pp. 1491–1492)
- Example: hydrogen for steel needs extra electricity – conflicts over land and habitats (Nikoleris 2019, p. 2)

2 What can companies do?

- Why the goals matter for companies
- The SDG Compass – five steps for companies
- From the company goal to the engineer's desk

WHY THE GOALS MATTER FOR COMPANIES

- The 2030 Agenda calls on all businesses to use their creativity and innovation for sustainable development (United Nations 2015, p. 29)
- Benefits named by the SDG Compass (GRI et al. 2015, p. 4):
  - future business opportunities
  - more value from corporate sustainability
  - better relations with stakeholders, keeping pace with policy
  - stable societies and markets
  - a common language
- Baseline first: law, minimum standards, human rights – no offsetting (ibid., p. 10)

THE SDG COMPASS IN FIVE STEPS

Step	What the company does
1 Understanding the SDGs	It familiarizes itself with the goals.
2 Defining priorities	It assesses where along its value chain it affects the goals – positively or negatively, today or in future – and defines its priorities.
3 Setting goals	It sets its own goals and aligns them with the SDGs.
4 Integrating	It integrates sustainability into its core business and governance, embeds the targets across all functions and engages in partnerships.
5 Reporting and communicating	It reports on its performance with common indicators and communicates with its stakeholders.

- Impact along the whole value chain, not only at the company's own sites (GRI et al. 2015, p. 12)
- Example fossil-free steel: three companies, one joint venture, the whole value chain (Nikoleris 2019, p. 1)
- Limit: designed for large multinational enterprises (GRI et al. 2015, p. 5)

FROM THE COMPANY GOAL TO THE ENGINEER'S DESK

Level	Goal or task
Company	Contribute to SDG 12 by phasing out all harmful chemicals in the products
Research and development	Identify alternative materials for all harmful chemicals identified in the products
Supply chain management	Identify and phase out harmful chemicals in purchased products and components
Engineer in research and development	Identify alternative materials for the harmful chemicals in the products and components under their responsibility
Component purchaser	Ensure that all suppliers comply with the purchasing policy on harmful chemicals

- Goals reach employees via the functions (GRI et al. 2015, p. 23)
- Employees contribute through daily decisions: material, supplier, process
- Limit: most organizations engage only superficially – ‘SDG-washing’ (Heras-Saizarbitoria et al. 2022, pp. 316, 325)
- Look for specific goals, targets and indicators – not for icons

3 Which goal will be yours?

- The 17 goals one by one: targets and where the world stands
- Selected examples of how engineers can contribute to achieving the goals

1 NO POVERTY

End poverty in all its forms everywhere



Icon: United Nations (United Nations 2023, p. 43)

- Targets: end extreme poverty; halve poverty by national definitions; social protection; access to basic services; resilience to disasters (United Nations 2015, p. 15)
- Where it stands: 10 % in extreme poverty in 2026 – three percentage points less than in 2015 (UN DESA 2026, p. 8)
- Mechatronics engineers: industrial products designed for emerging economies (UN Global Compact and KPMG 2016, p. 13)
- Industrial engineers: suppliers and retailers made more resilient to extreme weather and other shocks (ibid., p. 13)

2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Icon: United Nations (United Nations 2023, p. 44)

- Targets: end hunger and malnutrition; double the productivity and incomes of small-scale food producers; sustainable food production (United Nations 2015, pp. 15–16)
- Where it stands: 645 million people undernourished in 2025 – 7.8 % compared with 8.0 % in 2015 (UN DESA 2026, p. 10)
- Mechatronics engineers: machines for farming and food processing that use less energy (UN Global Compact and KPMG 2016, pp. 14–15)
- Industrial engineers: crop residues bought from farmers as fuel – a new source of income for them (ibid., p. 14)

3 GOOD HEALTH AND WELL-BEING



Ensure healthy lives and promote well-being for all at all ages

Icon: United Nations (United Nations 2023, p. 45)

- Targets: fewer deaths of mothers and children; end epidemics; health coverage for all; less illness from pollution (United Nations 2015, pp. 16–17)
- Where it stands: maternal mortality over 2.5 times the target; 4.6 billion people without essential health services (UN DESA 2026, pp. 12, 15)
- Mechatronics engineers: low-cost medical devices for middle- and low-income countries (UN Global Compact and KPMG 2016, p. 16)
- Industrial engineers: distribution networks and local service for these devices (ibid., p. 16)

4 QUALITY EDUCATION

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Icon: United Nations (United Nations 2023, p. 46)

- Targets: school for all; equal access to technical, vocational and university education; skills for employment (United Nations 2015, p. 17)
- Where it stands: more young people complete school, but 273 million have no access to education (UN DESA 2026, p. 16)
- Mechatronics engineers: education in science and technology, for example through school visits (UN Global Compact and KPMG 2016, pp. 18–19)
- Industrial engineers: training for the suppliers of components and raw materials (ibid., p. 18)

5 GENDER EQUALITY

Achieve gender equality and empower all women and girls



Icon: United Nations (United Nations 2023, p. 47)

- Targets: end discrimination and violence; equal opportunities for leadership; equal rights to economic resources (United Nations 2015, p. 18)
- Where it stands: 30.5 % of managerial positions held by women; parity in management more than 50 years away (UN DESA 2026, p. 18)
- Mechatronics engineers: plant facilities and processes adapted for women employees (UN Global Compact and KPMG 2016, p. 20)
- Industrial engineers: more businesses owned by women in the supply chain (ibid., p. 20)

6 CLEAN WATER AND SANITATION

Ensure availability and sustainable management of water and sanitation for all



Icon: United Nations (United Nations 2023, p. 48)

- Targets: safe drinking water and sanitation for all; better water quality; much more efficient water use (United Nations 2015, pp. 18–19)
- Where it stands: 74 % with safely managed drinking water; 10 % live in countries with high or critical water stress (UN DESA 2026, p. 20)
- Mechatronics engineers: dry machining instead of wet machining, which uses less water (UN Global Compact and KPMG 2016, p. 22)
- Industrial engineers: access to water for neighbouring communities, planned with the plant (ibid., p. 22)

7 AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

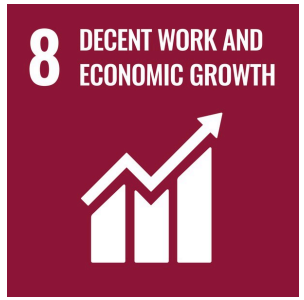


Icon: United Nations (United Nations 2023, p. 49)

- Targets: modern energy for all; much more renewable energy; double the rate of improvement in energy efficiency (United Nations 2015, p. 19)
- Where it stands: 92 % have electricity; renewables 18.0 % of final energy; efficiency gains too slow (UN DESA 2026, pp. 22–23)
- Mechatronics engineers: microgrids that bring renewable energy to rural communities (UN Global Compact and KPMG 2016, p. 25)
- Industrial engineers: more renewable energy in your own operations and at suppliers (ibid., p. 25)

8 DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all



Icon: United Nations (United Nations 2023, p. 50)

- Targets: growth and productivity; decent work for all; end child labour and forced labour; safe workplaces (United Nations 2015, pp. 19–20)
- Where it stands: 57.9 % of employment informal; 138 million children in child labour (UN DESA 2026, p. 25)
- Mechatronics engineers: technical support for small suppliers of components (UN Global Compact and KPMG 2016, pp. 28–29)
- Industrial engineers: standards for suppliers on labour rights, with training and checks (ibid., p. 28)

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



Icon: United Nations (United Nations 2023, p. 51)

- Targets: resilient infrastructure; sustainable industrialization; clean industries (target 9.4); more research (United Nations 2015, pp. 20–21)
- Where it stands: industry grows, but CO_2 from energy and industry at a record 38.1 billion tonnes (UN DESA 2026, pp. 26–27)
- Mechatronics engineers: machines that need less energy, such as a compressor using half the energy (UN Global Compact and KPMG 2016, p. 31)
- Industrial engineers: conversion to clean processes, such as steel with hydrogen (Nikoleris 2019, p. 1)

10 REDUCED INEQUALITIES

Reduce inequality within and among countries



Icon: United Nations (United Nations 2023, p. 52)

- Targets: faster income growth for the poorest 40 %; inclusion of all; end discrimination (United Nations 2015, p. 21)
- Where it stands: nearly one person in five reports discrimination; labour's share of output is falling (UN DESA 2026, p. 29)
- Mechatronics engineers: support for employees with disabilities in production (UN Global Compact and KPMG 2016, p. 35)
- Industrial engineers: a living wage and equal opportunity policies, also in the value chain (ibid., p. 34)

11 SUSTAINABLE CITIES AND COMMUNITIES

Make cities and human settlements inclusive, safe, resilient and sustainable



Icon: United Nations (United Nations 2023, p. 53)

- Targets: affordable housing; sustainable transport for all; clean air and waste management; green spaces (United Nations 2015, pp. 21–22)
- Where it stands: 1.16 billion people in slums; progress on clean air has stalled (UN DESA 2026, pp. 30–31)
- Mechatronics engineers: sustainable transport, such as fast-charging systems for electric buses (UN Global Compact and KPMG 2016, p. 36)
- Industrial engineers: affordable housing through finance, materials and logistics (ibid., p. 37)

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Ensure sustainable consumption and production patterns



Icon: United Nations (United Nations 2023, p. 54)

- Targets: efficient use of resources; halve food waste; much less waste; companies report on sustainability (United Nations 2015, pp. 22–23)
- Where it stands: material use up 25 % from 2015 to 2022; less than a quarter of electronic waste formally recycled (UN DESA 2026, pp. 32–33)
- Mechatronics engineers: machines and vehicles that use less energy and water, such as lighter car parts (UN Global Compact and KPMG 2016, pp. 38–39)
- Industrial engineers: by-products and waste of production used as raw materials (ibid., p. 40)

13 CLIMATE ACTION



Take urgent action to combat climate change and its impacts

Icon: United Nations (United Nations 2023, p. 55)

- Targets: resilience to climate hazards; climate measures in national policies; education and awareness (United Nations 2015, p. 23)
- Where it stands: 2024 the hottest year; record greenhouse gas emissions; current pledges would lead to 2.3–2.5 °C (UN DESA 2026, p. 34)
- Mechatronics engineers: machines that need less fuel, such as wheel loaders with better transmissions (UN Global Compact and KPMG 2016, p. 41)
- Industrial engineers: climate risks of plants assessed, disaster plans for high-risk sites (ibid., p. 41)

14 LIFE BELOW WATER

Conserve and sustainably use the oceans, seas and marine resources for sustainable development



Icon: United Nations (United Nations 2023, p. 56)

- Targets: less marine pollution; protect ecosystems; limit ocean acidification; end overfishing (United Nations 2015, pp. 23–24)
- Where it stands: 10 % of the ocean protected; 35.5 % of assessed fish stocks overfished (UN DESA 2026, pp. 36–37)
- Mechatronics engineers: components for ships that minimize the risk of marine pollution (UN Global Compact and KPMG 2016, p. 42)
- Industrial engineers: better waste treatment, so that no pollutants reach the sea (ibid., p. 42)

15 LIFE ON LAND

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss



Icon: United Nations (United Nations 2023, p. 57)

- Targets: conserve ecosystems; sustainable forests without deforestation; restore degraded land; halt the loss of biodiversity (United Nations 2015, pp. 24–25)
- Where it stands: 41 million hectares of forest lost since 2015; over 48 600 species threatened (UN DESA 2026, p. 38)
- Mechatronics engineers: soil-friendly machinery, such as low-pressure tyres against soil compaction (UN Global Compact and KPMG 2016, p. 43)
- Industrial engineers: wood only from certified sustainable sources (ibid., p. 43)

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels



Icon: United Nations (United Nations 2023, p. 58)

- Targets: less violence; rule of law; less corruption and bribery; transparent institutions; fundamental freedoms (United Nations 2015, pp. 25–26)
- Where it stands: homicide rate down 14 % since 2015; 17 % of people paid or were asked for a bribe (UN DESA 2026, pp. 40–41)
- Mechatronics engineers: security and privacy built into products from the start (UN Global Compact and KPMG 2016, p. 46)
- Industrial engineers: a compliance programme against bribery, such as in purchasing (ibid., pp. 45–46)

17 PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development



Icon: United Nations (United Nations 2023, p. 59)

- Targets: finance, technology, capacity-building, trade and partnerships for all the other goals (United Nations 2015, pp. 26–27)
- Where it stands: development assistance down a record 23.1 % in 2025 – 0.26 % of donors' national income (UN DESA 2026, p. 42) instead of 0.7 % (United Nations 2015, p. 26)
- Mechatronics engineers: technical expertise for industry initiatives and advice to governments (UN Global Compact and KPMG 2016, p. 47)
- Industrial engineers: the company's contribution to the goals measured and reported (ibid., p. 47)

4 What makes work scientific?

- Opinion, journalism or science?
- The 13 criteria one by one: relevance, originality, objectivity, honesty, traceability, logical argumentation, validity, reliability, verifiability, reflexivity, comprehensibility, responsibility, fairness

OPINION, JOURNALISM OR SCIENCE?

- 13 criteria show what distinguishes good research practice – and how scientific texts differ from everyday opinions and journalistic texts (Jungmann 2025, p. 11)
- From why research is done via how it is done and communicated to the responsibility of researchers (ibid., p. 11)

1. Relevance
2. Originality
3. Objectivity
4. Honesty
5. Traceability
6. Logical argumentation
7. Validity
8. Reliability
9. Verifiability
10. Reflexivity
11. Comprehensibility
12. Responsibility
13. Fairness

RELEVANCE

- A genuine contribution to the field: practical, theoretical or methodological
- Example: not ‘The history of football’, but the impact of the coronavirus pandemic on the financing of amateur football clubs in Germany

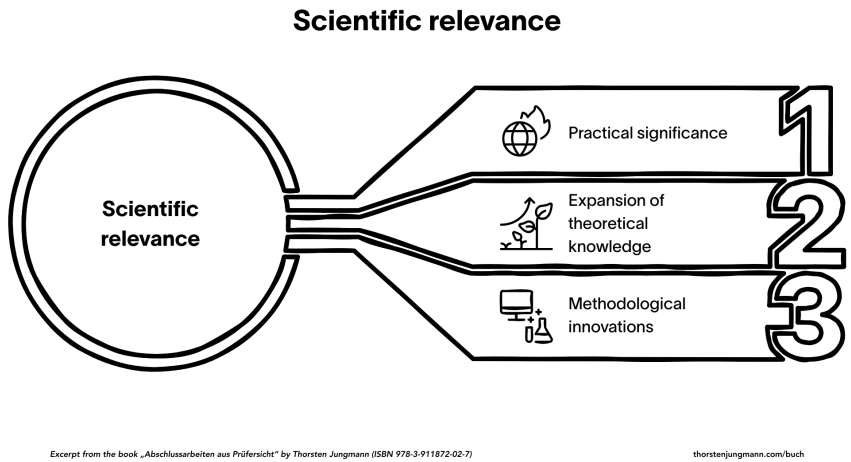


Figure: Jungmann (2025, p. 12), English version

ORIGINALITY

- An independent contribution: new data, innovative methods, creative links between theories
- Example: a master's thesis not only summarizes the literature on sustainability in the fashion industry, but also carries out a case study of a local fashion label

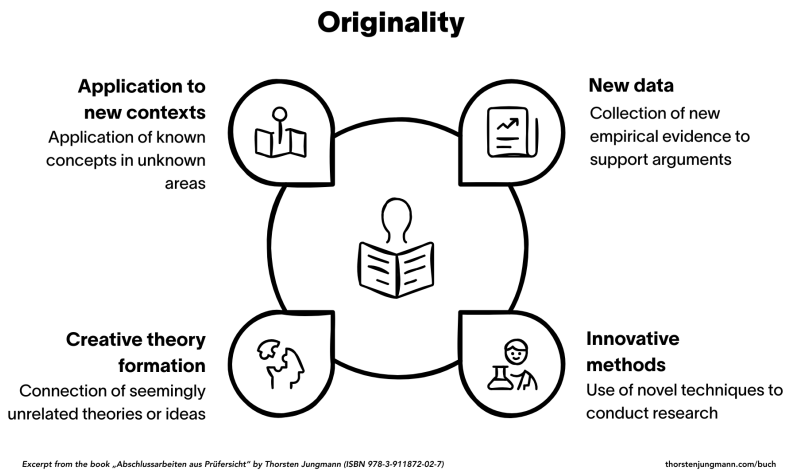


Figure: Jungmann (2025, p. 13), English version

OBJECTIVITY

- A neutral, unbiased approach – all relevant points of view, not only the supporting sources
- Example: in a study on nuclear energy, supporters and critics both have their say, presented fairly and in a balanced way

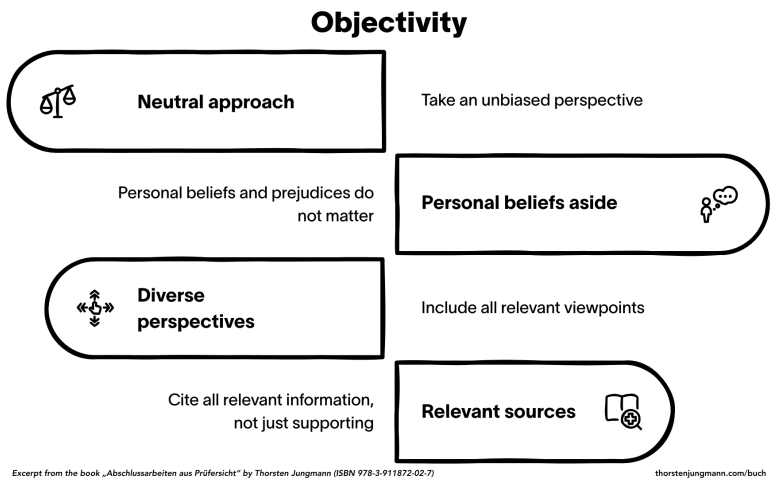


Figure: Jungmann (2025, p. 14), English version

HONESTY

- Data, methods and results presented truthfully; own ideas kept apart from those of others
- Example: if a survey does not confirm a hypothesis, you report this – instead of manipulating the results

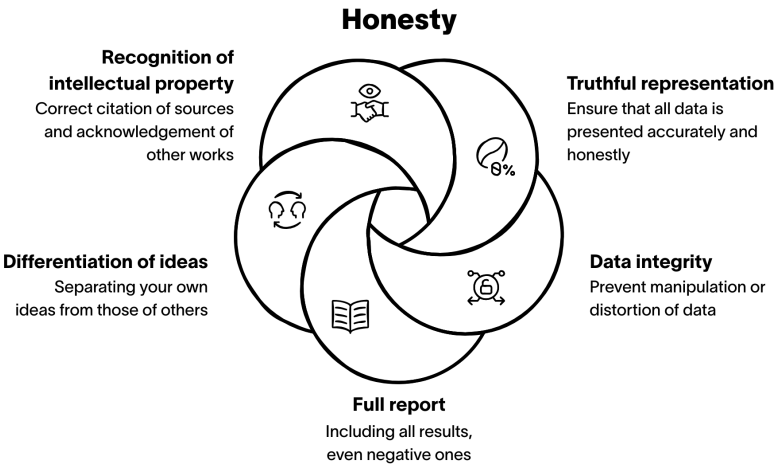


Figure: Jungmann (2025, p. 15), English version

TRACEABILITY

- Others can understand your entire work process and could repeat it: document your selection of literature, methodological decisions, data collection and analysis strategies
- Example: an experiment described with materials, participants, steps and ambient conditions, so that others can replicate it

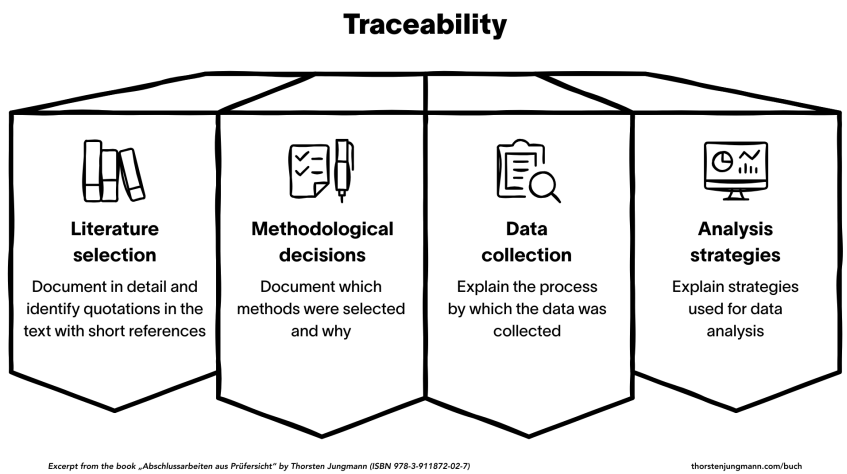


Figure: Jungmann (2025, p. 16), English version

LOGICAL ARGUMENTATION

- A clear structure free of contradictions that connects research question, theoretical framework, methodology and interpretation of results; claims supported by evidence
- Example: not ‘Product X is good because it has many functions’, but which functions solve which problems – checked against the requirements

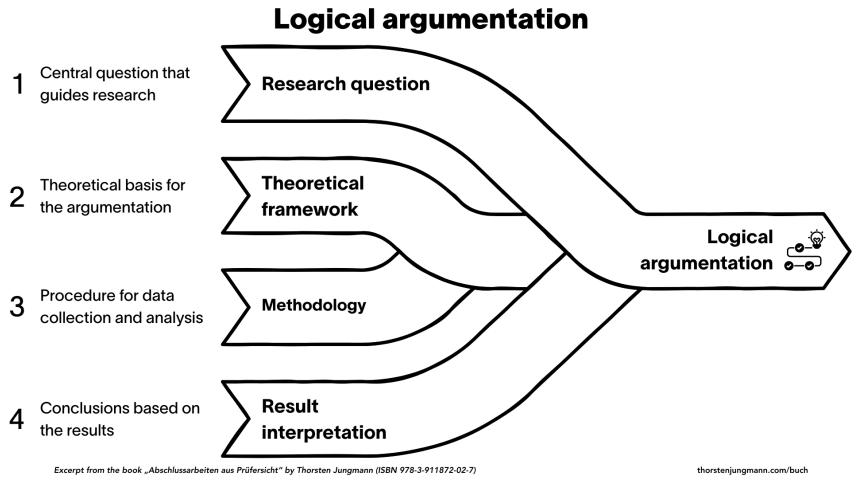


Figure: Jungmann (2025, p. 17), English version

VALIDITY

- A method captures what it claims to capture – in quantitative and qualitative studies, with validated instruments
- Example: to measure customer satisfaction, counting complaints is not enough – ask the customers directly

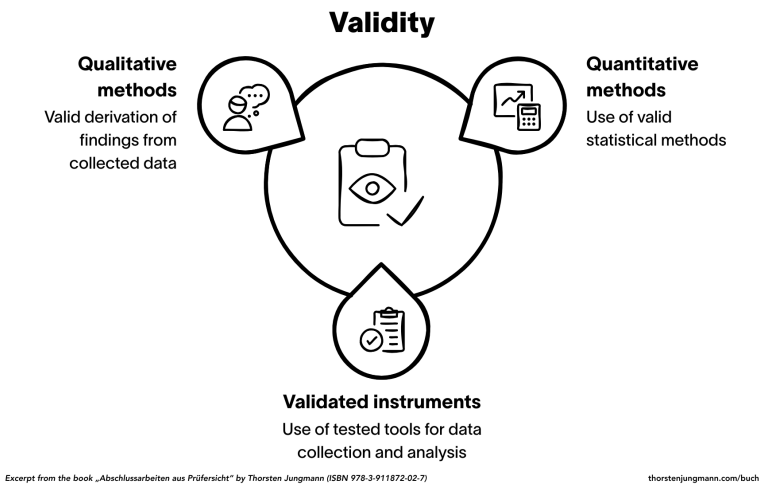


Figure: Jungmann (2025, p. 18), English version

RELIABILITY

- Repeated under the same conditions, a study leads to comparable results
- Example: repeat an experiment several times and/or use a large sample, so that random factors do not influence the results

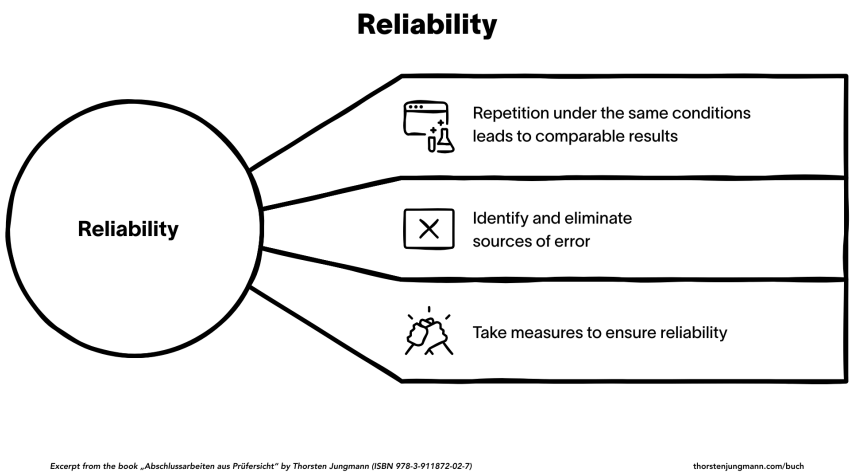


Figure: Jungmann (2025, p. 19), English version

VERIFIABILITY

- Others can verify or refute your results – document data, analysis steps and materials
- Example: make available the raw data and the code, the complete questionnaire or the topic guide of your interviews

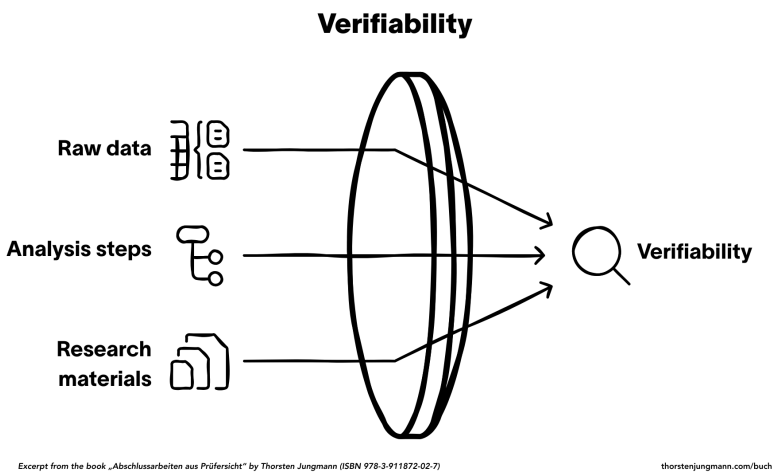


Figure: Jungmann (2025, p. 20), English version

REFLEXIVITY

- Critical self-reflection: question your assumptions, personal convictions and possible biases
- Example: in a study on homelessness, reflect on how your own social position and assumptions could influence the data and their interpretation

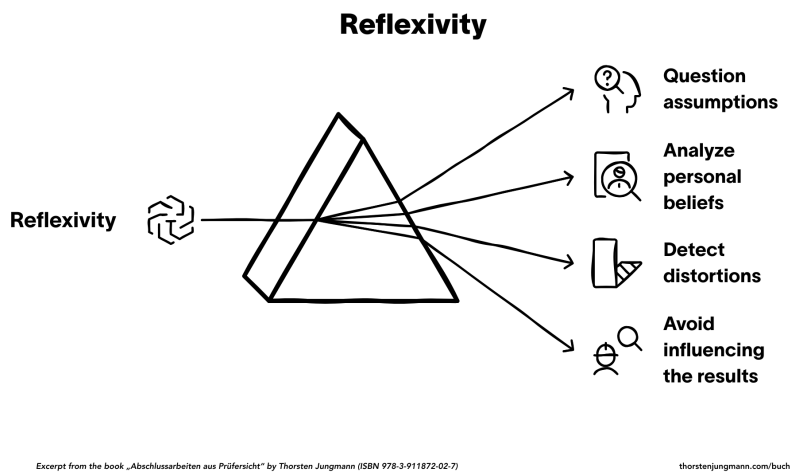


Figure: Jungmann (2025, p. 21), English version

COMPREHENSIBILITY

- Clear, precise language and an accessible presentation, without sacrificing depth
- Example: define technical terms – unless they are established in the discipline, such as the voltage divider in electrical engineering

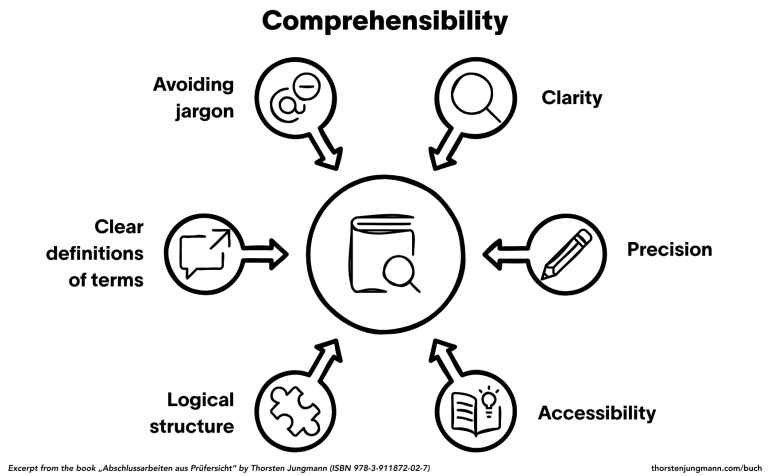


Figure: Jungmann (2025, p. 22), English version

RESPONSIBILITY

- Ethical handling of participants, data and the possible effects of your work
- Example: in an experiment with learners, inform the participants in advance about the aim, the procedure, possible burdens and their rights

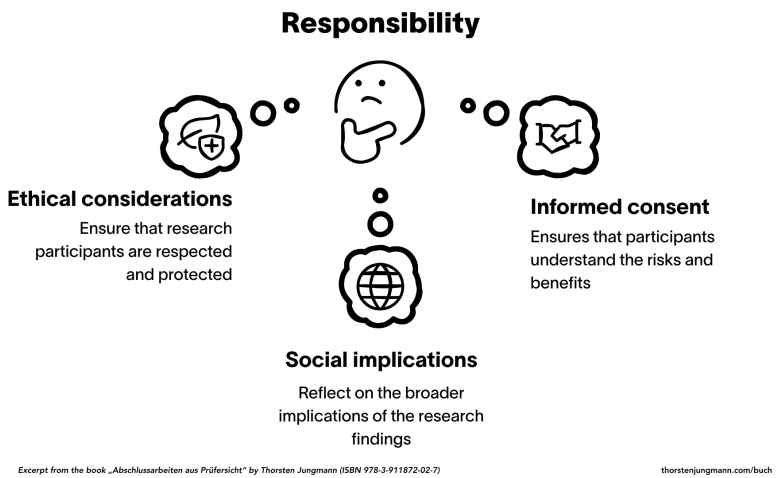


Figure: Jungmann (2025, p. 23), English version

FAIRNESS

- Competing theories, points of view and methods appreciated and not distorted
- Example: a literature review presents the various studies and theories without favouring a point of view or a methodology

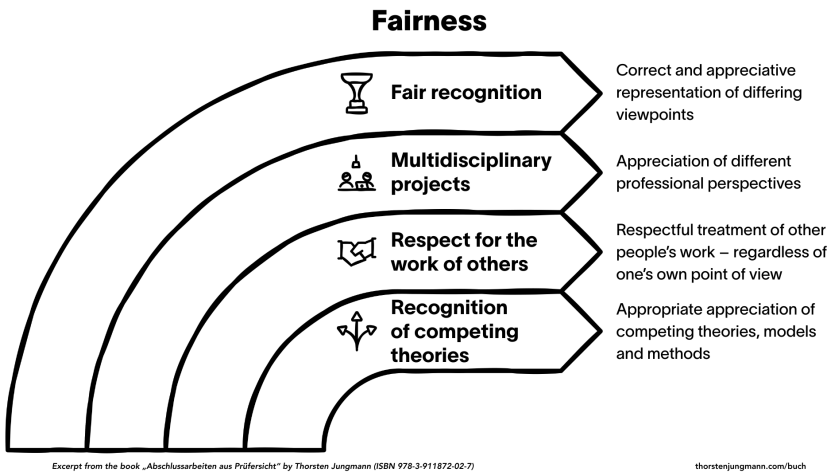


Figure: Jungmann (2025, p. 24), English version

5 From your question to the sources

- Step 1: A good question
- Step 2: Your own answer – before any source
- Step 3: Questioning the AI and checking its sources
- Step 4: Reading a scientific text

STEP 1: A GOOD QUESTION

- A good question is relevant, open, answerable with sources and precise
- Example: ‘Does hydrogen make steel production climate-neutral?’
  - open: depends on how the electricity is produced (Nikoleris 2019, p. 2)
  - precise: ‘fossil free’ is not the same as zero emissions (ibid., p. 2)
- Phase 1: choose one of three questions for your goal – tailored to its source package
- Phase 3: you tailor your own question (FTS-08)

STEP 2: YOUR OWN ANSWER

- Your own answer comes first – before any source
- What do you think – and why? I know … I assume … I am not sure whether …
- Example: ‘I think so, because … only water is produced. … But I do not know where the hydrogen comes from …’
- Your starting point for step 5 (reflexivity); your ideas apart from those of others (honesty)
- Phase 1: written in the session today – on your poster as you wrote it



Image by Qwen-Image 2.1

STEP 3: QUESTIONING THE AI

- The same question, word for word, to the AI service of your goal
- Save the complete answer with date, service and model
- Check like a reviewer: Which sources? Do they exist? Do they say what the AI claims?
- Fabricated references: 55 % with ChatGPT-3.5; 18 % with ChatGPT-4 (Walters and Wilder 2023, p. 1)
- The AI answer is never a source and never evidence
- Quoted only to examine it: long reference and note directly at the quotation
- Data and facts never come from the AI (guide to Scientific Work, 2.10)

STEP 4: READING A SCIENTIFIC TEXT

- Your source package in the Zotero group FTS-resources-1
- Peer-reviewed: checked by experts before publication (Jungmann 2025, p. 141)
- Structure, for example in Vogl et al. (2018): abstract, introduction, method, results and discussion, conclusion
- Read in passes: overview – content – depth (Keshav 2007, pp. 83–84)
- Note every statement in your own words, with short reference and page

6 Your goal, your question

- Your goal and your question
- Your AI service and your source package
- From today to your elevator talk

YOUR GOAL AND YOUR QUESTION

- Sign up for one goal in ILIAS – five places per goal
- Choose one of the three questions of your goal – the exercise lists all of them
- Write down your own answer – before any source

YOUR AI SERVICE AND YOUR SOURCE PACKAGE

SDG	AI service	Access
1, 7, 13	ChatGPT	https://chatgpt.com
2, 8, 14	Perplexity	https://www.perplexity.ai
3, 9, 15	Claude	https://claude.ai
4, 10, 16	Gemini	https://gemini.google.com
5, 11, 17	Vibe by Mistral AI	https://chat.mistral.ai
6, 12	Grok	https://grok.com

- Registration an obstacle? Use the AI chat service of HSBI (HSBIKI) instead
- Scientific sources for your poster: the source package of your goal in Zotero

FROM TODAY TO YOUR ELEVATOR TALK

- Today, FTS-02: your goal, your question, your own answer
- Until FTS-03 on 23 October: steps 3 and 4 on your own
  - Step 3: Questioning the AI and checking its sources
  - Step 4: Reading a scientific text and noting where a statement comes from
- FTS-03: weighing up, citing on the poster, poster design
- Poster upload in ILIAS: Wednesday 28 October 2026 at 23:55
- FTS-04 on 30 October: elevator talks, grouped by goal
  - In 60 to 90 seconds, briefly and concisely: your question, your own answer, what the scientific sources say, how the AI answer fits in, and the insight you take away from the exercise

7 What have you learnt today?

- The building blocks of knowledge
- Answers to the guiding questions

WHAT YOU HAVE LEARNT

- Sustainable development and the 2030 Agenda
- Goals, targets and indicators
- The 17 goals and where the world stands
- Synergies and trade-offs between the goals
- How companies and their employees contribute
- The 13 criteria of scientific work
- Steps 1 to 4 of the didactic concept
- Phase 1 step by step

ANSWERS TO THE GUIDING QUESTIONS

- The goals? 17 goals with 169 targets – companies contribute along their value chain, employees through daily decisions
- Scientific? 13 criteria, from relevance to fairness
- First four steps? A good question, your own answer, the checked AI answer, the scientific answer



Image by Qwen-Image 2.1

Your turn: sign up for your goal, choose your question and write down your own answer.

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