



Overview of ISO/TR 21245

“Guidance on railway project planning”

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1. Basics of ISO/TR 21245: Structure

- Universal idea of projects, based on ISO 21500 “Guidance on project management”
 - ✓ Every project has a **start** and an **end**.
 - ✓ Deliverables of the project are provided for **operations**.
- Specificities of railway projects and rail system (Clause 4)
 - ✓ **Long life cycle** (Subclause 4.4: Necessity of long-term viewpoint)
 - ✓ **Complexity** (Subclause 4.5: Necessity of analyzing complex correlations and causalities between subsystems)
- Procedure of railway projects and their planning process (Clause 5, 6)



1. Basics of ISO/TR 21245: Structure

- **Factors to be taken into account in planning process and which significantly affect railway projects (Clause 7-9)**
 - ✓ Stakeholders involved in the project and their needs and interests (Clause 8)
 - ✓ Basic conditions which are indigenous and difficult to change (Clause 9)
- **How to deals with factors (Clause 10-13, Annex A and B)**
 - ✓ Analysis of correlation and causality of factors (Clause 10)
 - ✓ Prioritization and weighting of factors (Clause 11)
 - ✓ Seeking solutions for conflict (Clause 12)
 - ✓ Case study (Clause 13, Annex A and B)



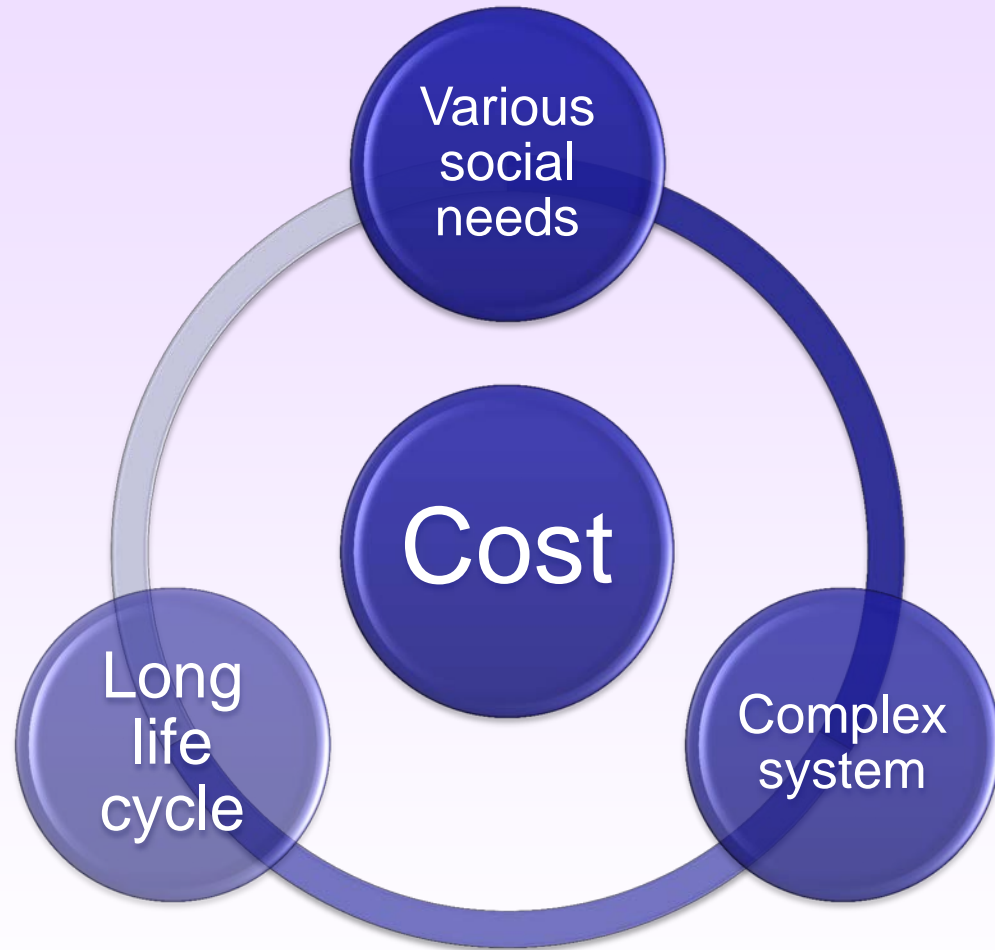
1. Basics of ISO/TR 21245: Strategic benefits

1. Avoid misunderstanding with unified language and common project framework
2. Figure out important factors without missing any
3. Minimize risks caused by reworking and changes in your project by doing 1. and 2.
4. Save your budget and time by doing 1. and 2.
5. Clarify what you really want in your project
6. Bringing about success of the project by taking into account priority, compromise and technical innovations
7. Justify your project plan (based on the official ISO document)
8. Serve as educational material for beginners of railway projects

ISO/TR 21245 will be the ticket to a successful railway project for everyone!



2. Successful philosophies in Japanese railway operations



- Understanding social needs, correlations and causalities between relevant factors of complex rail system as much as possible
- Having long-term vision not swayed by low initial cost or immediate profit
- Balancing factors, which have a trade-off relationship





3. Quick examples of ISO/TR 21245 application

- How-to information -

[Basic purposes]

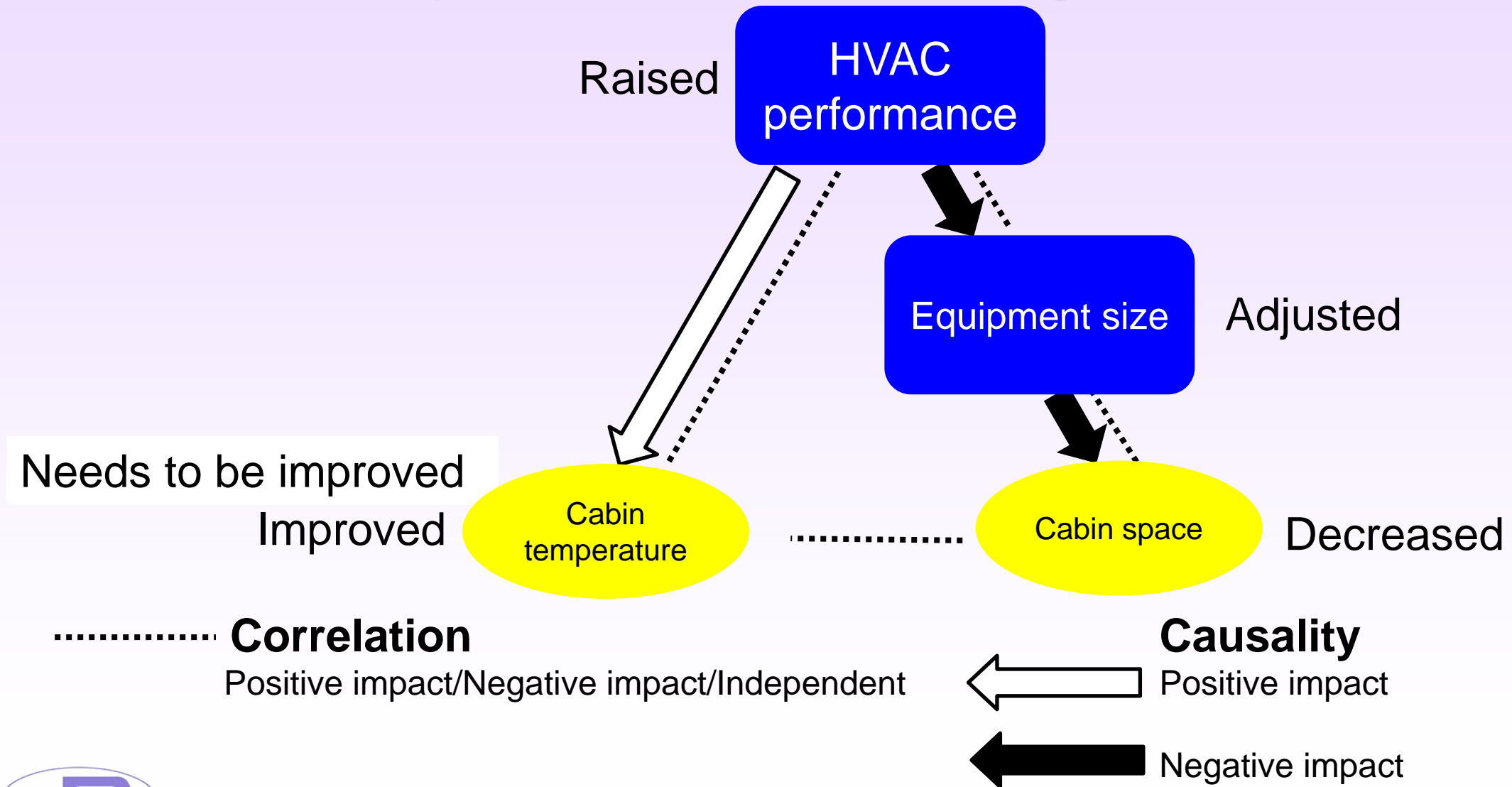
- ✓ **Justifying a developed railway project plan**
- ✓ Explaining the design philosophy of the railway system qualitatively
- ✓ No intention of unifying specifications or processes like other commonly used standards for products/test methods

[Possible beneficiaries]

- 1. Contractees of the railway projects:**
Enables clarification and proposes needs to contractors and sponsors
- 2. Parties relevant to the railway project other than contractees/contractors**
(such as wayside residents):
Contributes to delivery of the system, which meets to their needs
- 3. Contractors such as consultants:**
Enables justification and explains the developed basic plan logically
Prevents reworking in planning process due to overlooking important factors

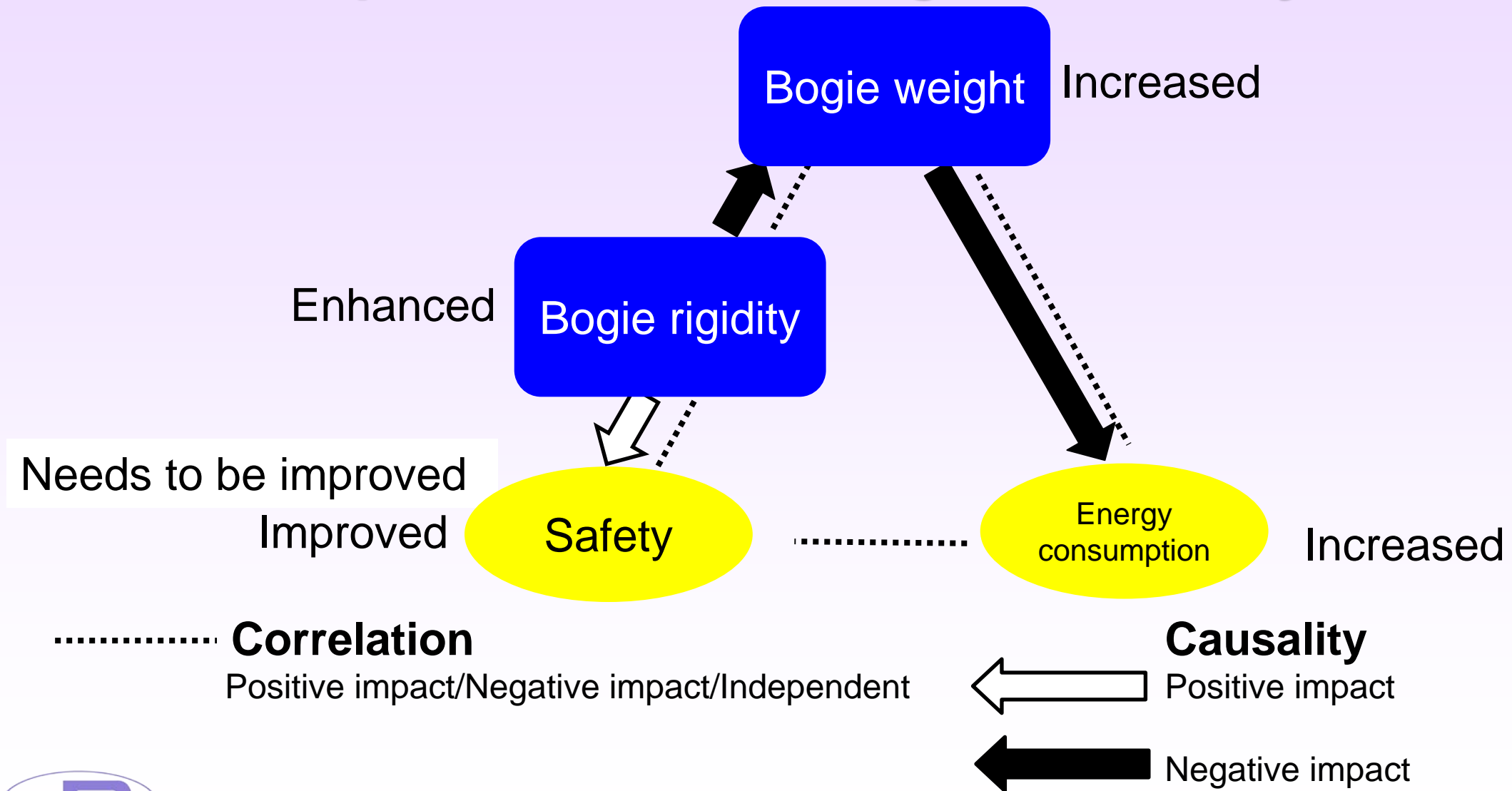
3. Quick examples of ISO/TR 21245 application

- Improvement of HVAC system -



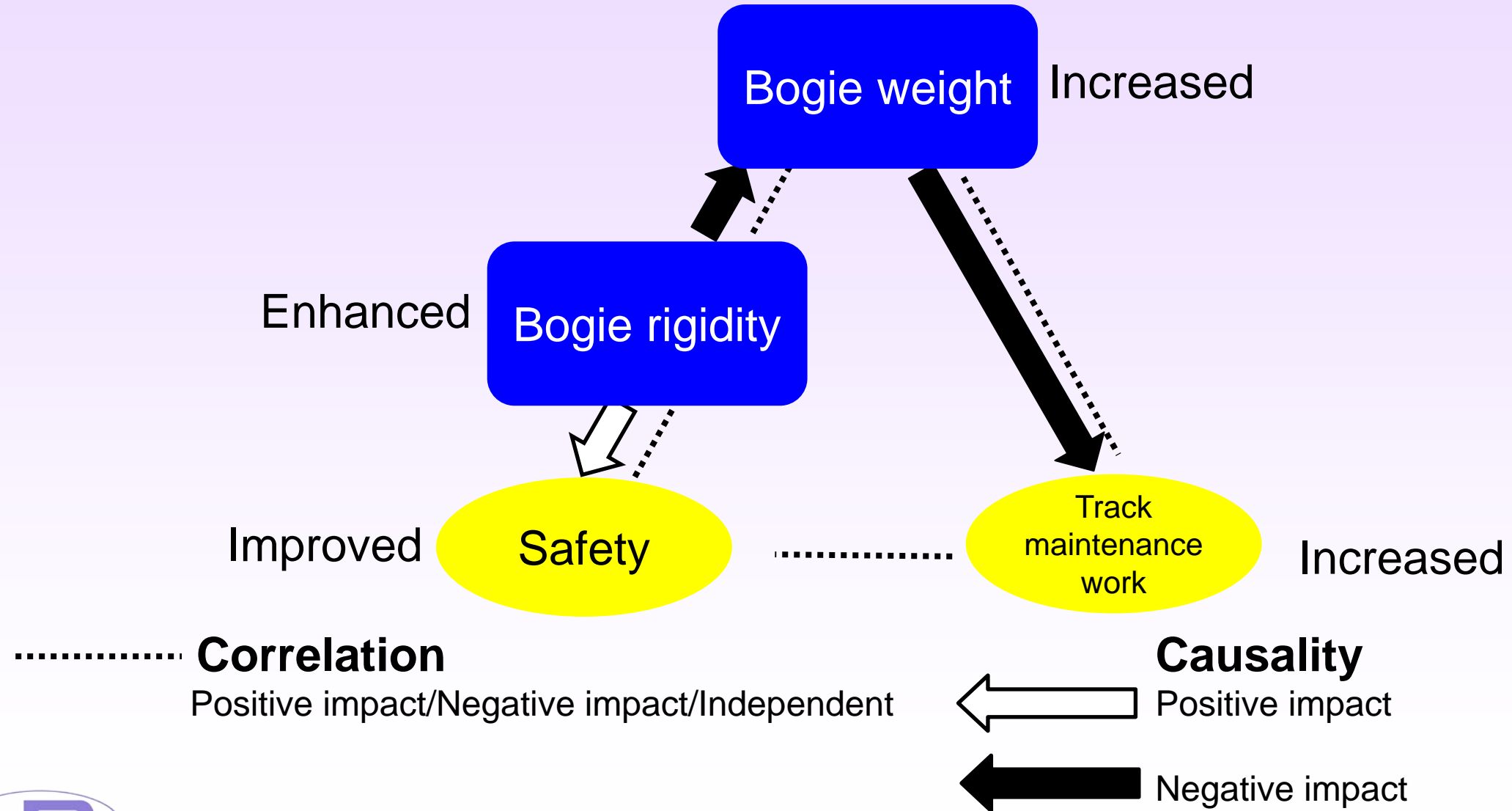
3. Quick examples of ISO/TR 21245 application

- Improvement of rolling stock safety -



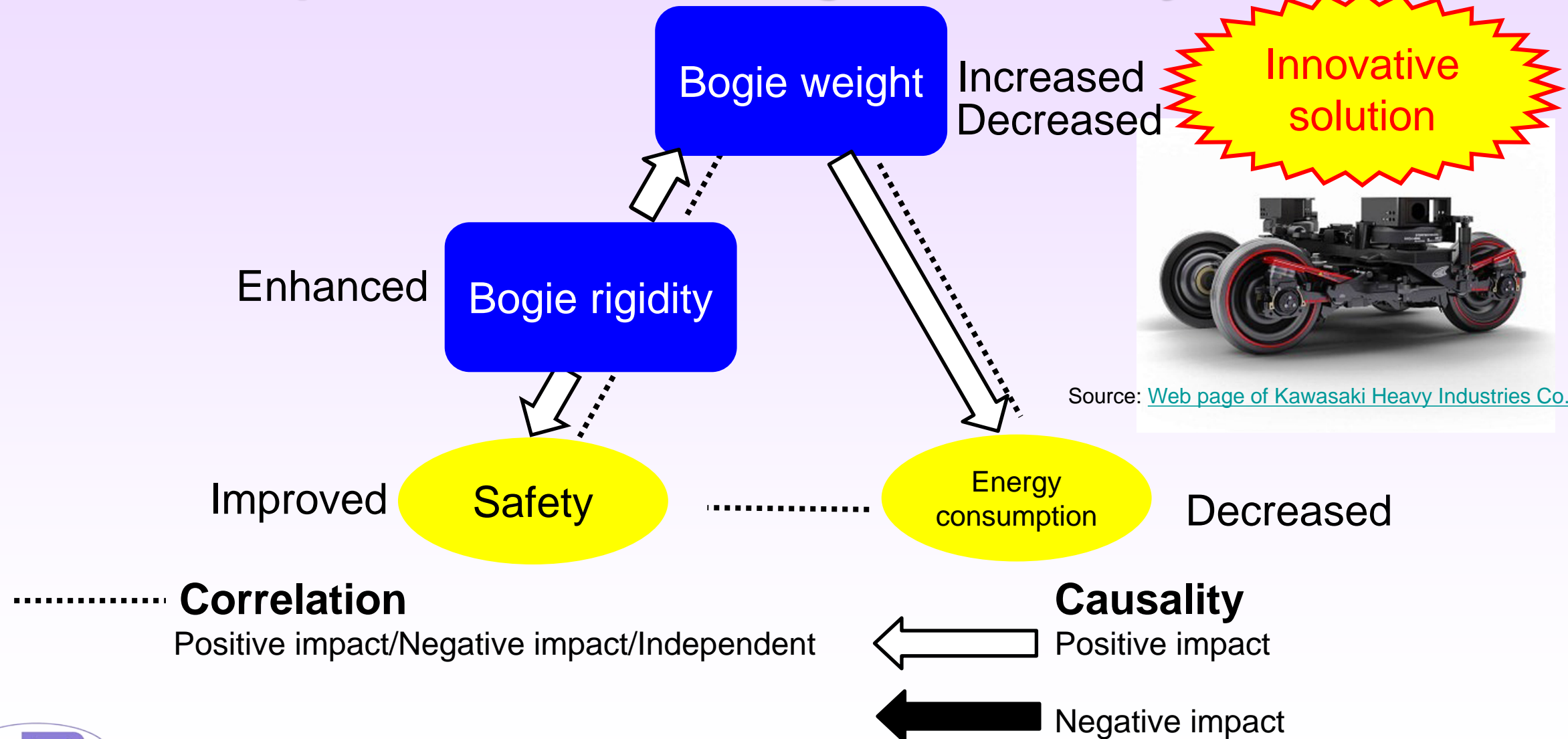
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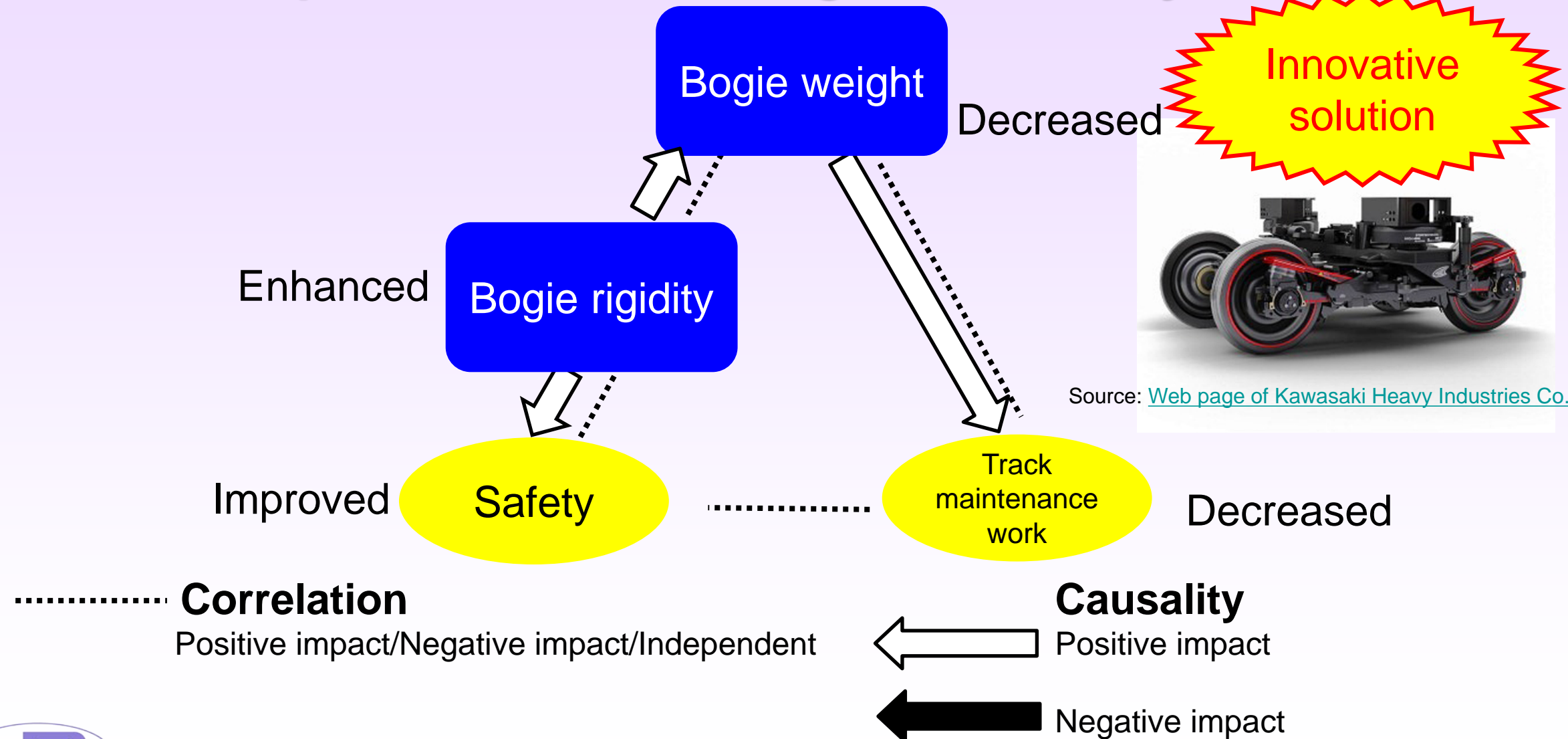
3. Quick examples of ISO/TR 21245 application

- Improvement of rolling stock safety -



3. Quick examples of ISO/TR 21245 application

- Improvement of rolling stock safety -



3. Quick examples of ISO/TR 21245 application

- Construction of a new railway line -

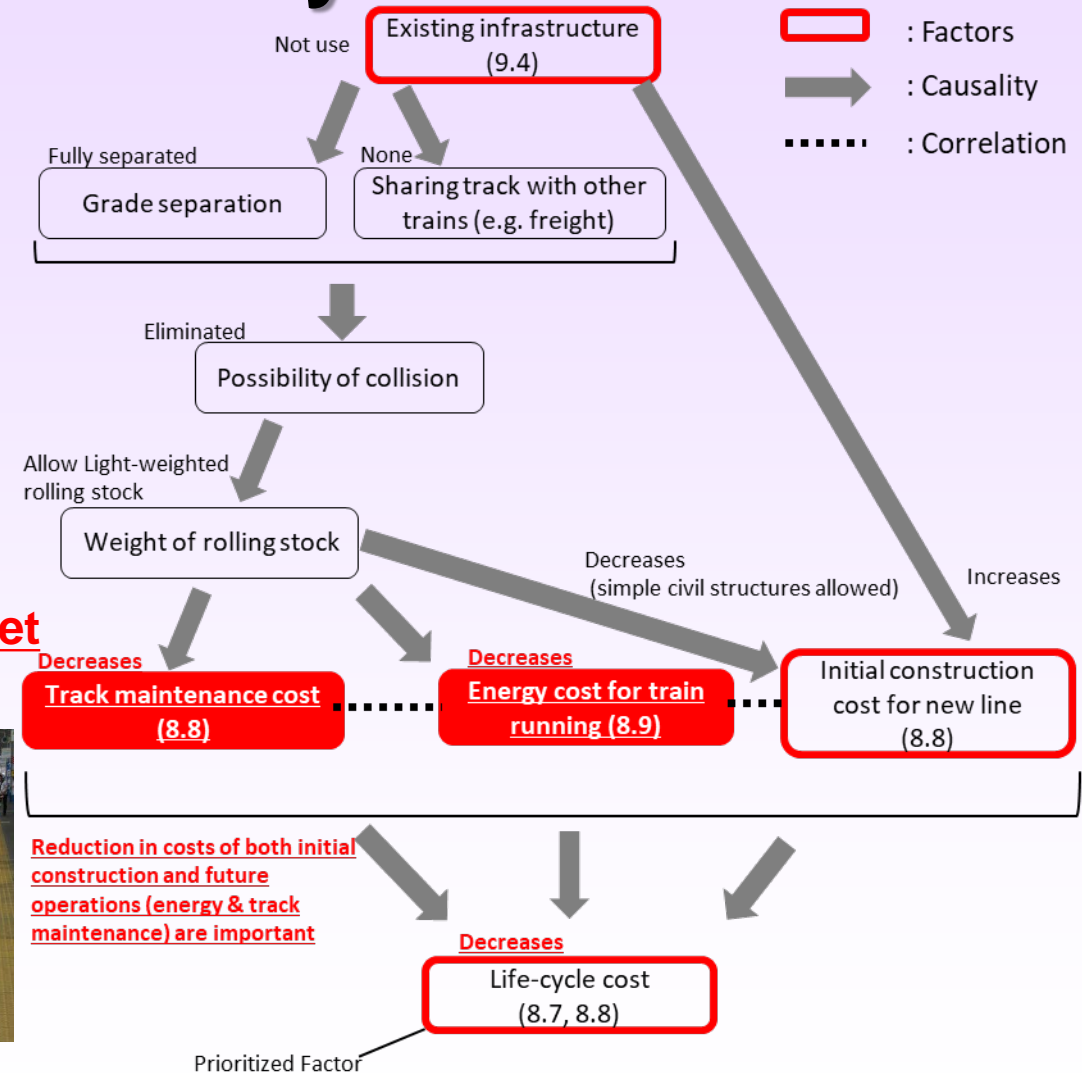
[Essential acts in planning]

1. Think about what factors to take into account.
2. Consider correlation and causality among factors.
3. Consider priority & weight of factors.
4. Seek a solution for coordinating/balancing factors.

[Case study]

* Example of deriving solution by applying the principle of the TR

✓ Ensuring safety by dedicated line and light weight train set
✓ Reducing life-cycle cost



A case where **new and fully separated infrastructure** is utilized

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3. Quick examples of ISO/TR 21245 application

- Construction of a new railway line -

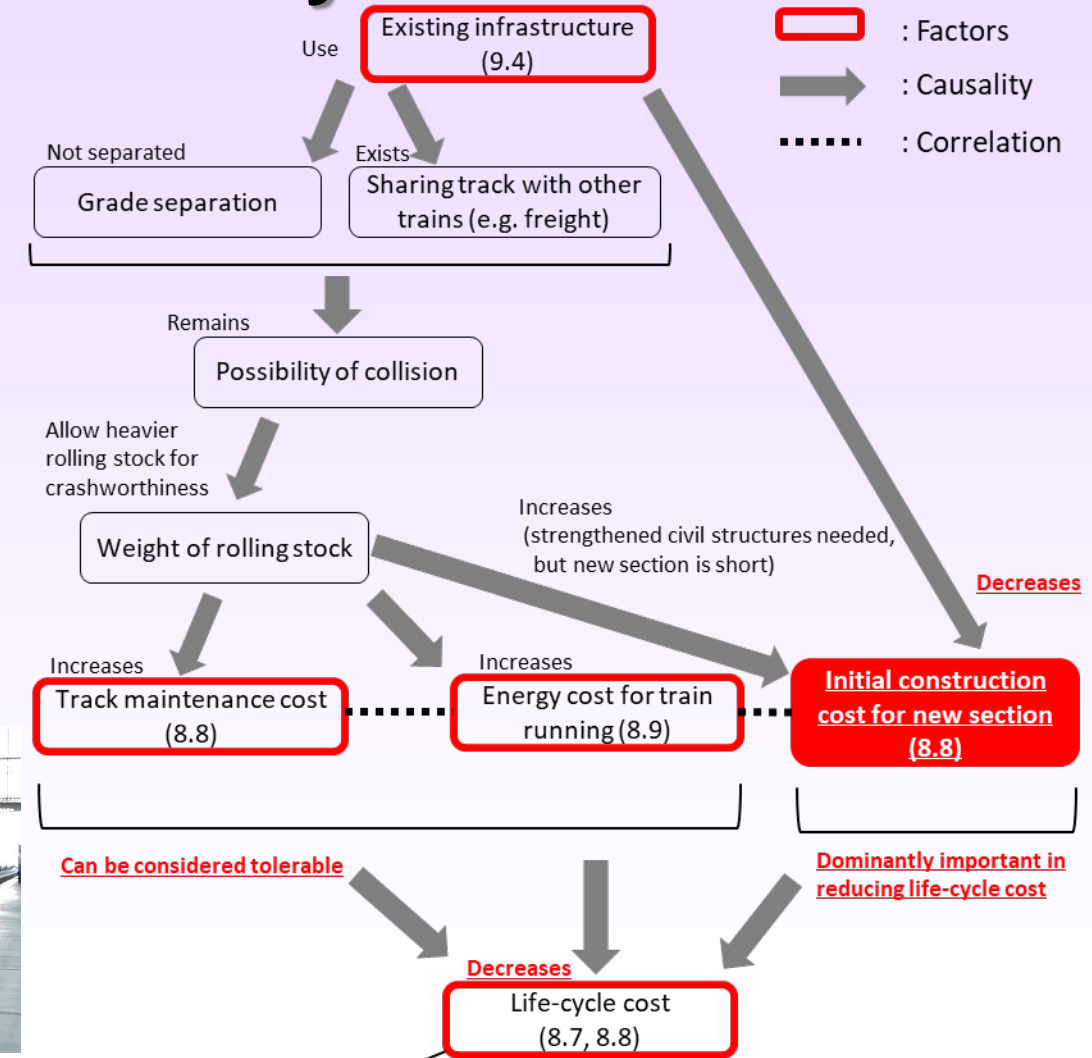
[Essential acts in planning]

1. Think about what factors to take into account.
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[Case study]

* Example of deriving solution by applying the principle of the TR

✓ Reducing initial construction cost for new section
✓ Reducing life-cycle cost



A case where **existing infrastructure** is utilized

Prioritized Factor



Thank you for your kind attention!

