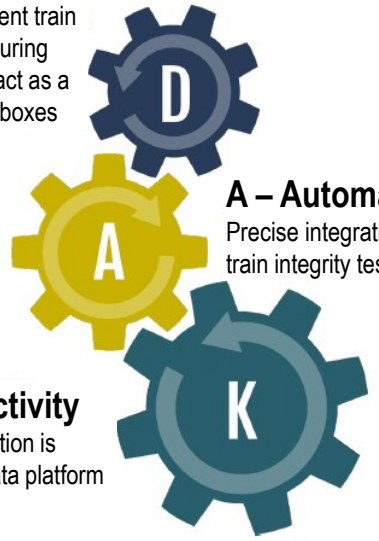
Taking Swiss rail freight transport to the next level

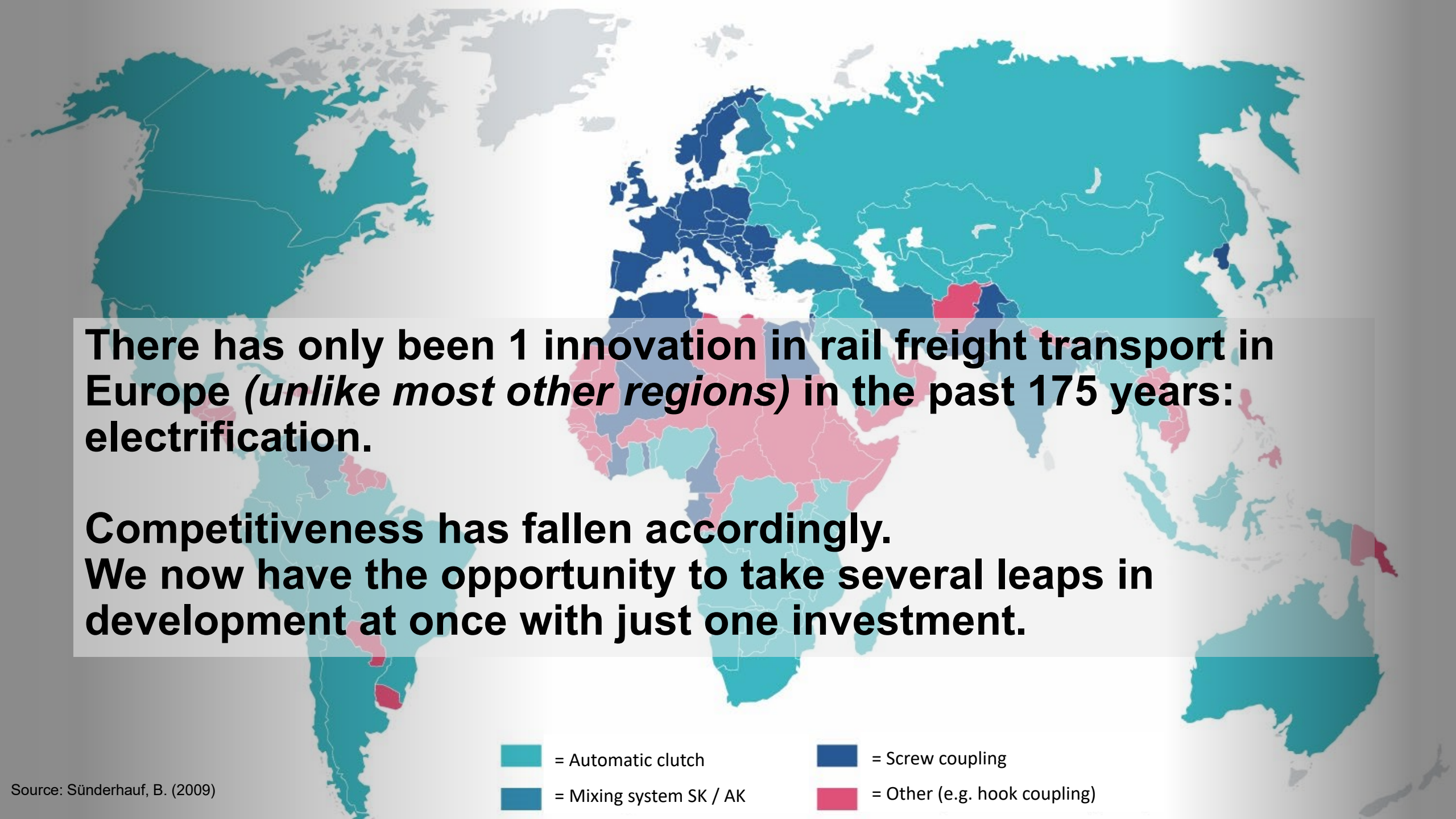
D – Digitalization
Simpler and more efficient train dispatch, for example during brake testing, sensors act as a warning system for hot boxes



A – Automation
Precise integration of a train into the logistics chain, digital data transmission of train integrity testing, optimization of capacities on the network

C – Connectivity
Coupled information is provided on a data platform

In Zusammenarbeit mit:



There has only been 1 innovation in rail freight transport in Europe *(unlike most other regions)* in the past 175 years: electrification.

Competitiveness has fallen accordingly.
We now have the opportunity to take several leaps in development at once with just one investment.

Source: Sünderhauf, B. (2009)

The competitiveness of rail freight transport is declining, a free choice of the means of transport is at risk

Productivity

Manual processes are time-consuming (train preparation > 3 hours, during which the train cannot depart).

High costs, poor quality

Capacity

The flexibility and responsiveness of timetables is restricted by inefficient and non-digitized processes.

Capacity of existing infrastructure cannot be fully utilized

Quality

Information on the location and quality of delivery during the trip is not available.

Flexibility and reliability remain low

no customer orientation possible

Shortage of labour

Unwieldy processes require heavy physical work.

Safety and health as an increased risk

There will be a shortage of shunting workers in the foreseeable future.

Competitiveness

Competitiveness will continue to decline without innovation and digitalization.

Downward spiral

The free choice of a means of transport is at risk.

Challenges in freight transport

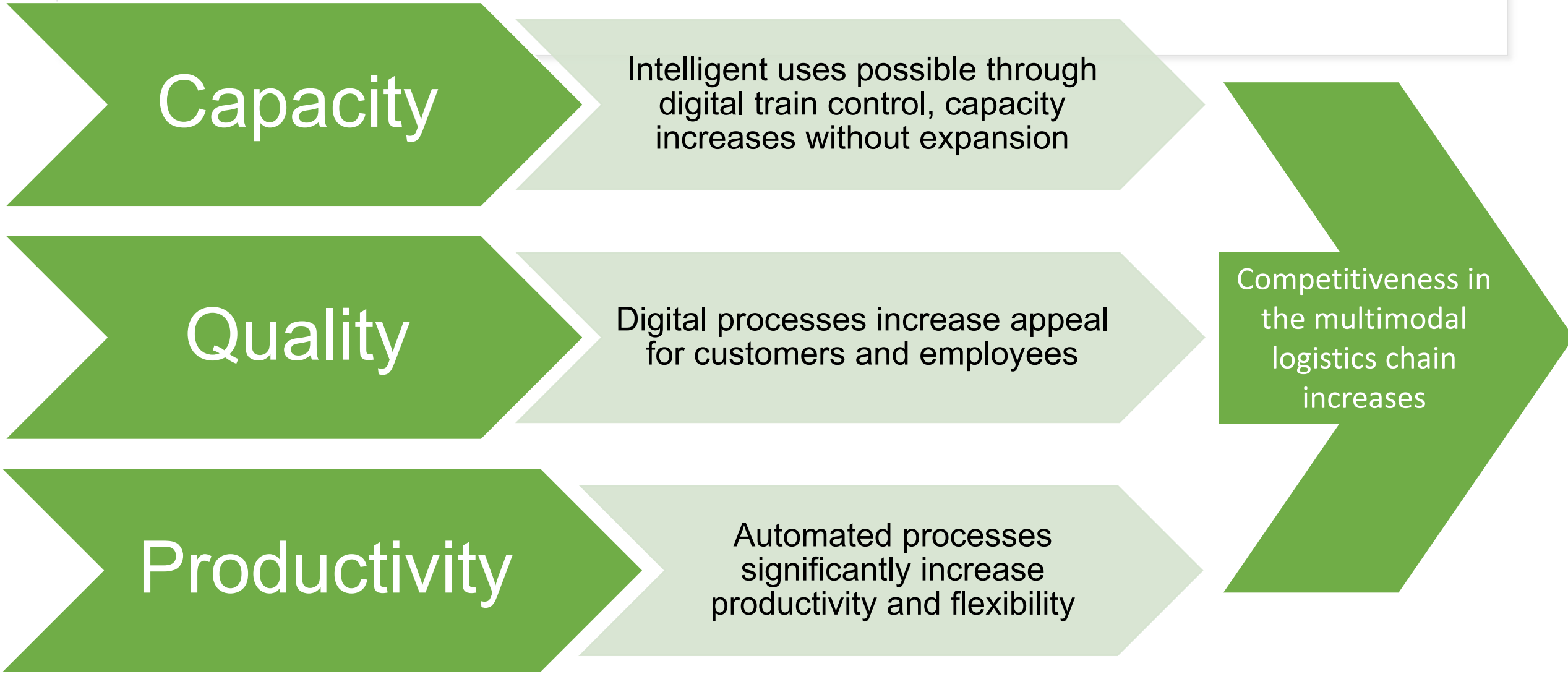
Predicted growth: 30% more freight traffic in CH alone by 2050

Capacity → capacities on road and rail are limited, where is there still potential without expansion? How can we improve interfaces in the multimodal transport chain?

Environmental impact → 1/3 of emissions are caused by transport, politicians have high goals to reduce emissions → Green Deal CH/EU

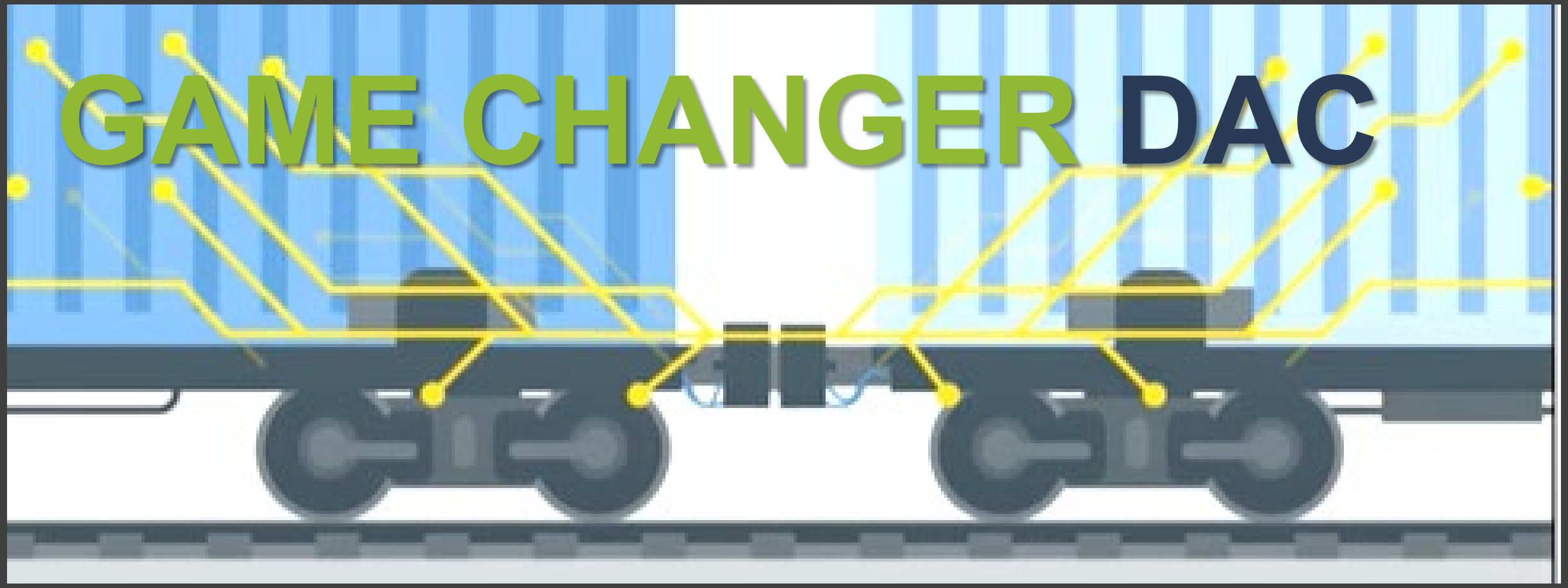
Competitiveness of the "green" mode of transport → after 175 years without innovation, the strengths of rail freight transport are diminishing compared to other modes of transport

Levers with digitalization and automation



Through **digitalization and automation**, the freight train can become a **competitive player** in the multimodal transport chain!

GAME CHANGER DAC



Rail freight transport 4.0

DIGITAL TRAIN CONTROL

Digital automatic coupling (DAC) enables a continuous power and data line in the train. This is the prerequisite for the automation and digitalization of rail freight transport.

New functions with DAC...


Automatic (de)coupling


Heavier trains with maximum train length


Higher speeds


Permanent monitoring of wagon components


Automatic brake test


Automated wagon inspection

Train integrity


Telematics


Easy logistics ordering

... enable breakthrough benefits


Save time and money

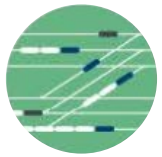

Market growth and new markets


Increase in productivity


Easy integration into the logistics chain


Customer satisfaction


Environment: Green Deal


Intelligent capacity increase

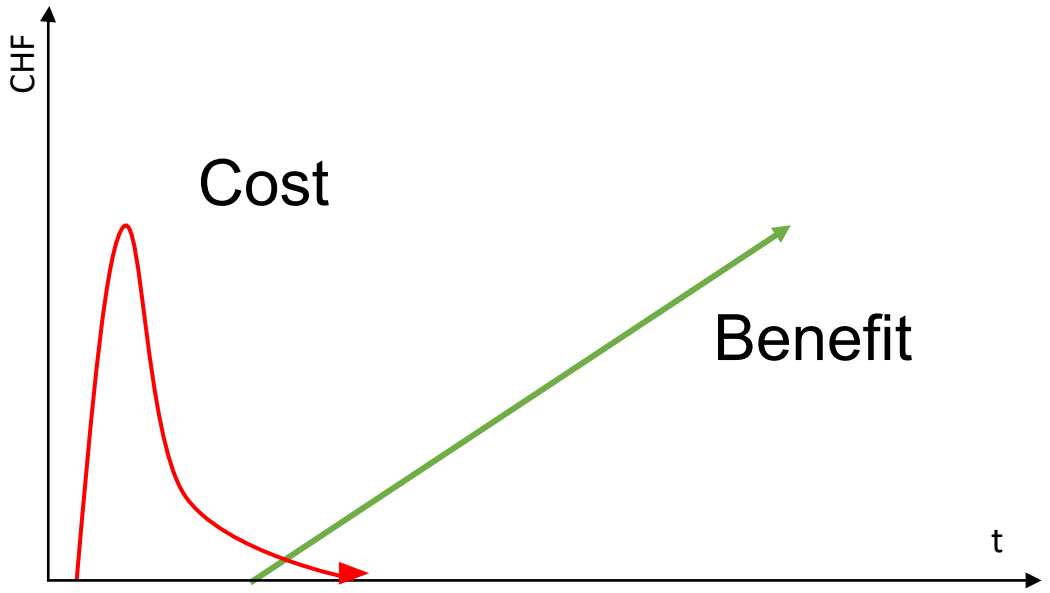

Safety


Labour market


Quality

With **political and financial support**, rail freight transport can be steered into the **digitalized and automated world**.

Why does the industry need support?



The benefits are evident in the long term and are distributed among several market participants.

Political support
To ensure seamless coordination between Switzerland and the EU.

Financial support
The high initial investments cannot be managed by the industry players.

A large number of wagons have to be coordinated and converted in a short period of time so they remain compatible with each other and the benefits unfold quickly, with the aim of self-sufficiency.

The industry is behind this project

Signatories to the Memorandum of Understanding on the digitalization and automation of Swiss rail freight transport:

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra
Bundesamt für Verkehr BAV

cargorail.ch

VÖV UTP
Verband öffentlicher Verkehr
Union des transports publics
Unione dei trasporti pubblici

In collaboration with:

acts

bls

CT-X Rail Service AG

DB Cargo

ermewa

GATX Rail Europe

HASTAG

HAFENBAHN SCHWEIZ AG

HOLCIM

HUPAC

JOSEF MEYER RAIL
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MFDRail

rail360

railCare

Panlog

DIE POST

SBB CFF FFS Cargo

UIP

VTG

wascosa

WRS

TRANSWAGGON TWA

Project information

What has happened so far, the latest findings and the next steps can be found at:

www.cargorail.ch/digitalisierung-sgv

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Digital connectivity as the backbone for a strong rail freight transport system.