



PROVINCIA AUTONOMA DI TRENTO



CONVEGNO
TRENTO, VENERDÌ 15 APRILE 2016

LA COMPETITIVITÀ DEL TRASPORTO INTERMODALE SULL'ASSE DEL BRENNERO

Markus Singer

**Collaboratore ufficio pianificazione dei trasporti del
Land Tirolo**



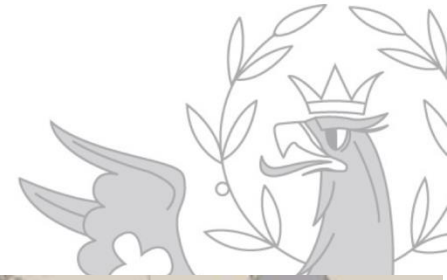
Tagung:

**Die Wettbewerbsfähigkeit des intermodalen Transports
auf der Brennerachse**

Zukünftige Maßnahmen in Tirol durch Swiftly Green

Markus Singer

Swiftly Green: Sweden-Italy Freight Transport and Logistics Green Corridor



- **Projektlaufzeit: 10/2013 - 12/2015**
- **13 Projektpartner**
- **Ziel: Entwicklung einer Toolbox mit Maßnahmen und Empfehlungen zum „Greening“ in TEN-T Korridoren (Scan-Med)**
- **Methodik: Mapping, Evaluierung bestehender Studien, Analyse von Maßnahmen, Best-practise Beispiele**
- **Ergebnis: ca. 130 analysierte Maßnahmen, Green Corridor Portal, Green Corridor Development Plan**





Greening Objective

- Noise reduction
- Energy and GHG
- Modal Shift
- Transport Flow Improvement
- Reduction of Air Pollutants
- Increase Efficiency of a mode

Modes of Transport

- Road
- Rail
- Sea
- Intermodal
- IWW

Evaluation Results

Greening Effects: 1.5



Marketability: 1.5



Corridor: 3



TRL Search

Value: 0



Semantic Search

"last mile"

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Last-mile technology for locomotives

The last-mile can be identified as the distance between the main track and the shunting yard, the terminal or a not electrified local track...[read more](#)

Axle- and wheel-mounted disc brakes to reduce the noise emissions of freight vehicles

Disc brakes are a technical solution to substitute the noise-provoking block brake on freight vehicles. Disc brakes can be mounted...[read more](#)


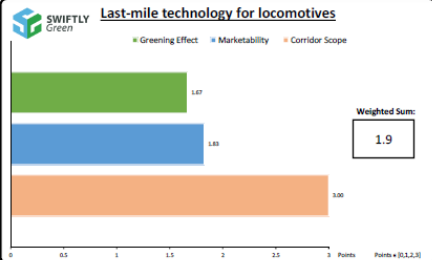
AUTOMAIN

To keep up with the rising strain on railways due to increased rail traffic over the last years, new and innovative inspection and...[read more](#)

Factsheet - Bsp.: Last-Mile Technologie für Lokomotiven



- Hybridlokomotiven (Elektro- und Dieselmotor) für nicht elektrifizierte Streckenabschnitte
- Greening Objectives:
 - Energie und CO2-Einsparungen
 - Modal Shift
 - Verbesserung im Verkehrsfluss
- Zusätzliche qualitative Analyse in den Gesichtspunkten
 - Technical: erhöhter technischer Aufwand
 - Economic: z.B. Zeiteinsparung
 - Environmental: mit Batterie emissionsfrei
 - Social: weniger Personal nötig

4.18. Last-mile technology for locomotives															
Description:	The last-mile can be identified as the distance between the main track and the shunting yard, the terminal or a not electrified local track. Additional shunting locomotives with diesel engine are necessary to operate trains in these track sections. Hybrid locomotives have an electric and diesel engine and can operate in electrified and not electrified track sections to avoid two locomotives for a complete operation process.														
	Source: http://www.eurailpress.de/news/normenzulassungen/single-view/news/bombardier-bav-erteilt-last-mile-lokomotive-die-betriebsbewilligung-fuer-den-vorspannbetrieb.html (accessed: 07.05.2015)														
Derivation:	Locomotive developments from various rail vehicle manufacturers.														
Cluster Group:	Alternative Fuels	Noise Reduction Technologies	Wagon and Vehicle Development	Horizontal Transportation	Operational and Service Innovations	Innovative and Alternative Transport Systems									
	Last Mile	Port Innovation	Specialised containers	Improve utilisation rate	Tracking & Tracing, ICT										
Greening objectives:	Noise reduction	Energy and GHG	Modal Shift	Transport Flow Improvement											
Evaluation Results:															
Utility analysis:	 <table border="1"> <caption>Utility Analysis Data</caption> <thead> <tr> <th>Category</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Greening Effect</td> <td>1.87</td> </tr> <tr> <td>Marketability</td> <td>1.83</td> </tr> <tr> <td>Corridor Scope</td> <td>1.80</td> </tr> <tr> <td>Weighted Sum</td> <td>1.9</td> </tr> </tbody> </table>					Category	Value	Greening Effect	1.87	Marketability	1.83	Corridor Scope	1.80	Weighted Sum	1.9
Category	Value														
Greening Effect	1.87														
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Technical:	<ul style="list-style-type: none"> • In last-mile locomotives, two propulsion systems are used, namely, an electric and diesel engine. • At not electrified track sections, the diesel engine supplies energy to the electric engine using an additional generator. • Dependent on load, track conditions and the locomotive itself, the maximum velocity of the locomotive is 40 km/h and operation time is about 8 hours. • Locomotives can pull the same train either in electro or diesel based traction mode. 														
Economic:	<ul style="list-style-type: none"> • Last-mile locomotive avoid the need of additional diesel shunting locomotives and thus reduce financial efforts • They also reduce maintenance efforts and staff. • They can pull the train without any locomotive change directly into the non-electrified last-mile track section which saves time and financial resources. Furthermore the transport flow can be improved. 														
Environmental:	<ul style="list-style-type: none"> • Using only batteries, some last-mile locomotives run completely emission free on short distances. • Additional diesel based locomotives are superfluous. 														
Social:	<ul style="list-style-type: none"> • The reduction of shunting locomotives influences directly the necessary staff for the shunting locomotives. 														
Overall evaluation and recommendations:															
Last-mile locomotives are a useful technical solution to run the train to its final destination which is typically a non-electrified track section (shunting yard, freight terminal or siding). Additional diesel shunting locomotives are not necessary anymore which can reduce the time and costs for the operation and improves also the transport flow.															



Land Tirol und Swiftly Green



Mögliche Folgeschritte:

- **Durchsicht der Maßnahmen von Swiftly Green und mögliche Beachtung und Einarbeitung im Aktionsplan Brenner 2016**

Stakeholder sind eingeladen den Maßnahmenkatalog im Green Corridor Portal zu erweitern

**www.swiftlygreen.eu
www.greencorridorportal.org**



Vielen Dank für die Aufmerksamkeit