

## 3S RENON, BOLZANO, ITALY – A SUCCESS STORY



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In the heart of the Alps

The historical context

Why 3S?

The PPP (Private – Public – Partnership)

The Construction

The Technology

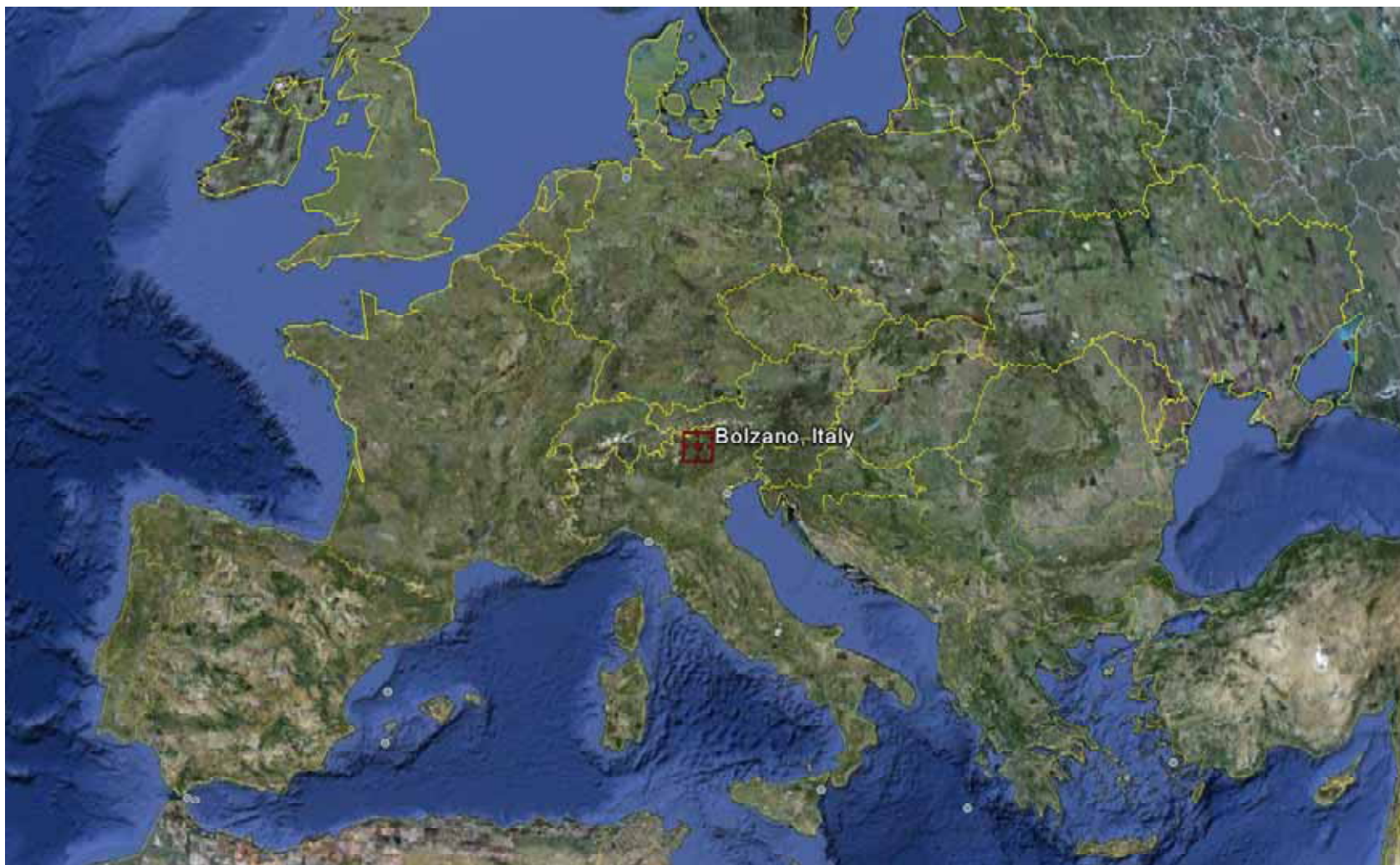
The Architecture

The Operation

“The” success Story

## IN THE HEART OF THE ALPS

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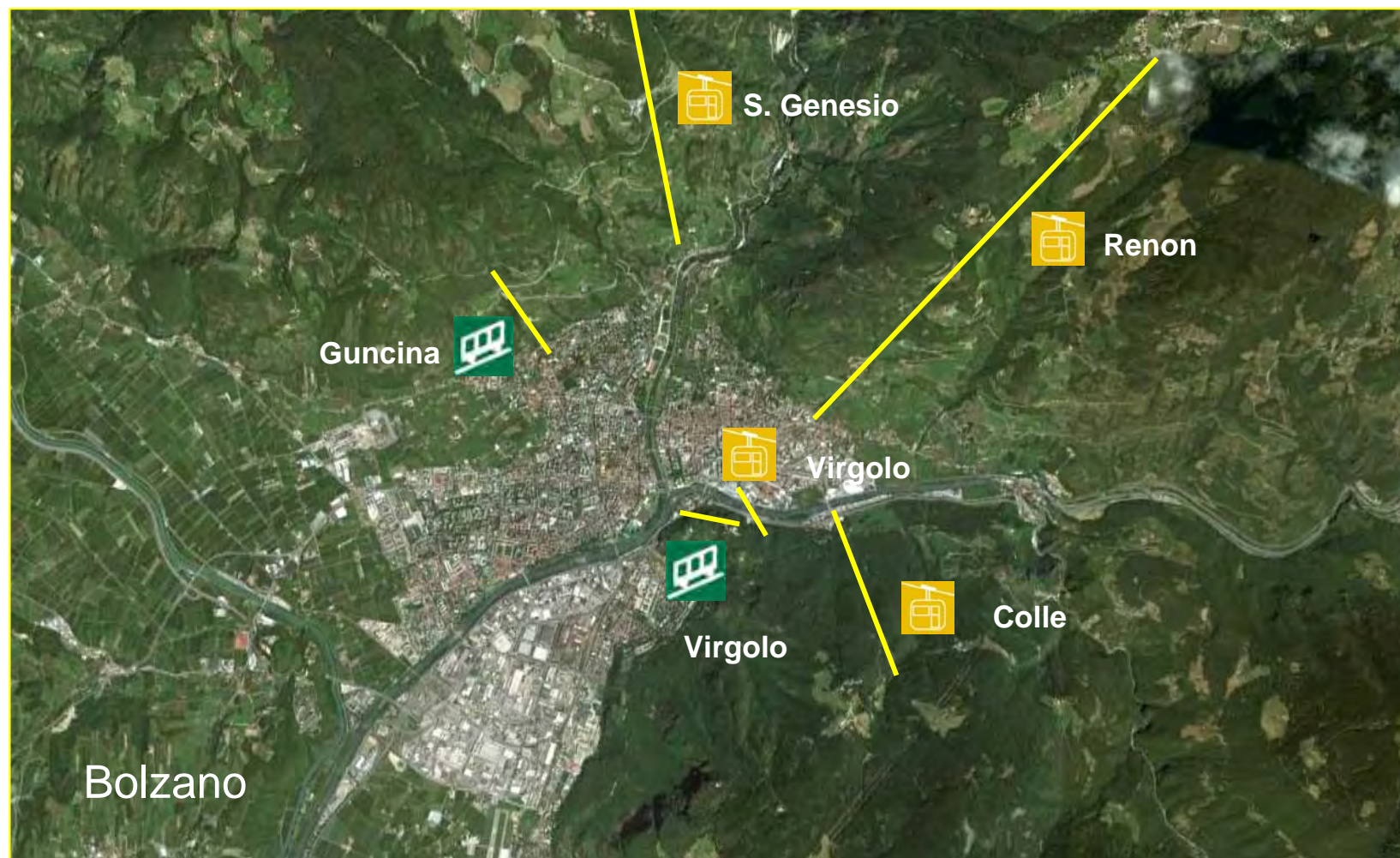


## IN THE HEART OF THE ALPS

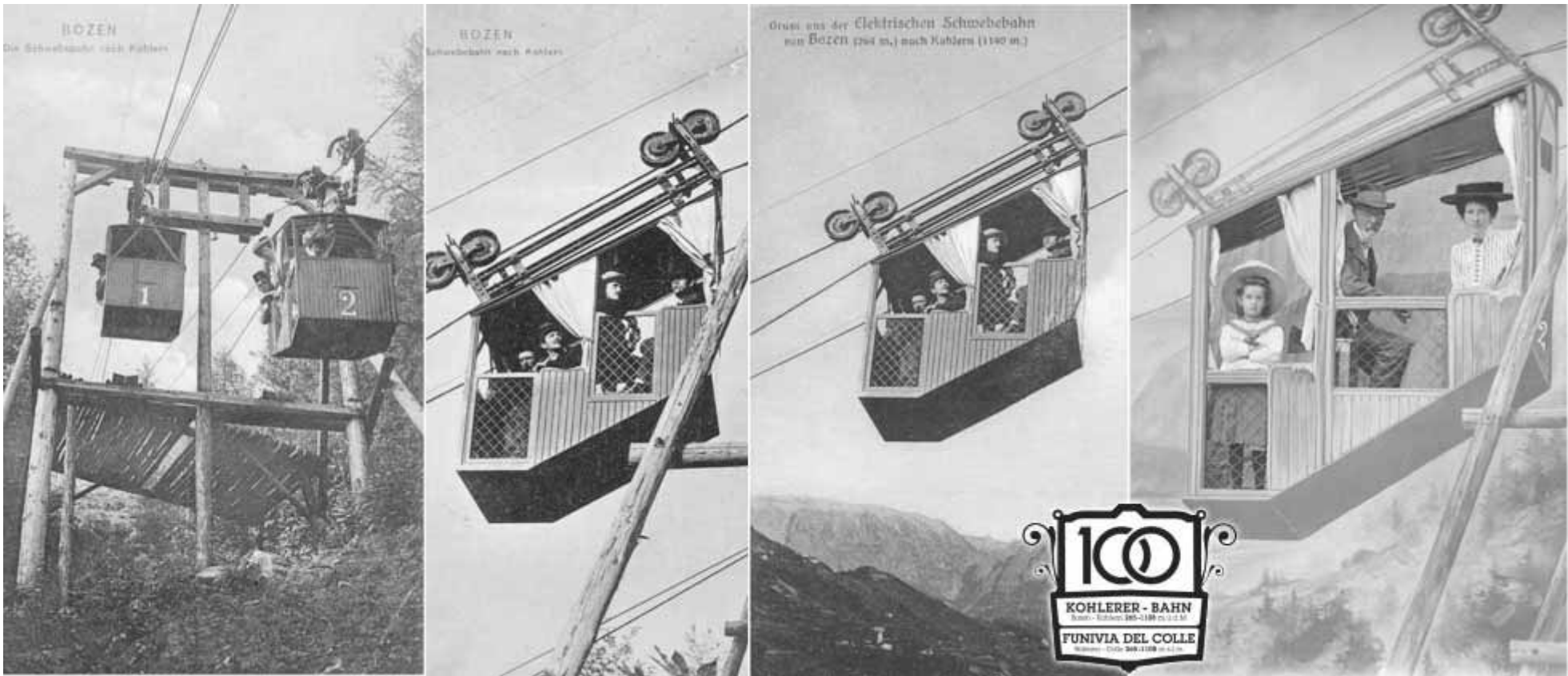
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## IN THE HEART OF THE ALPS



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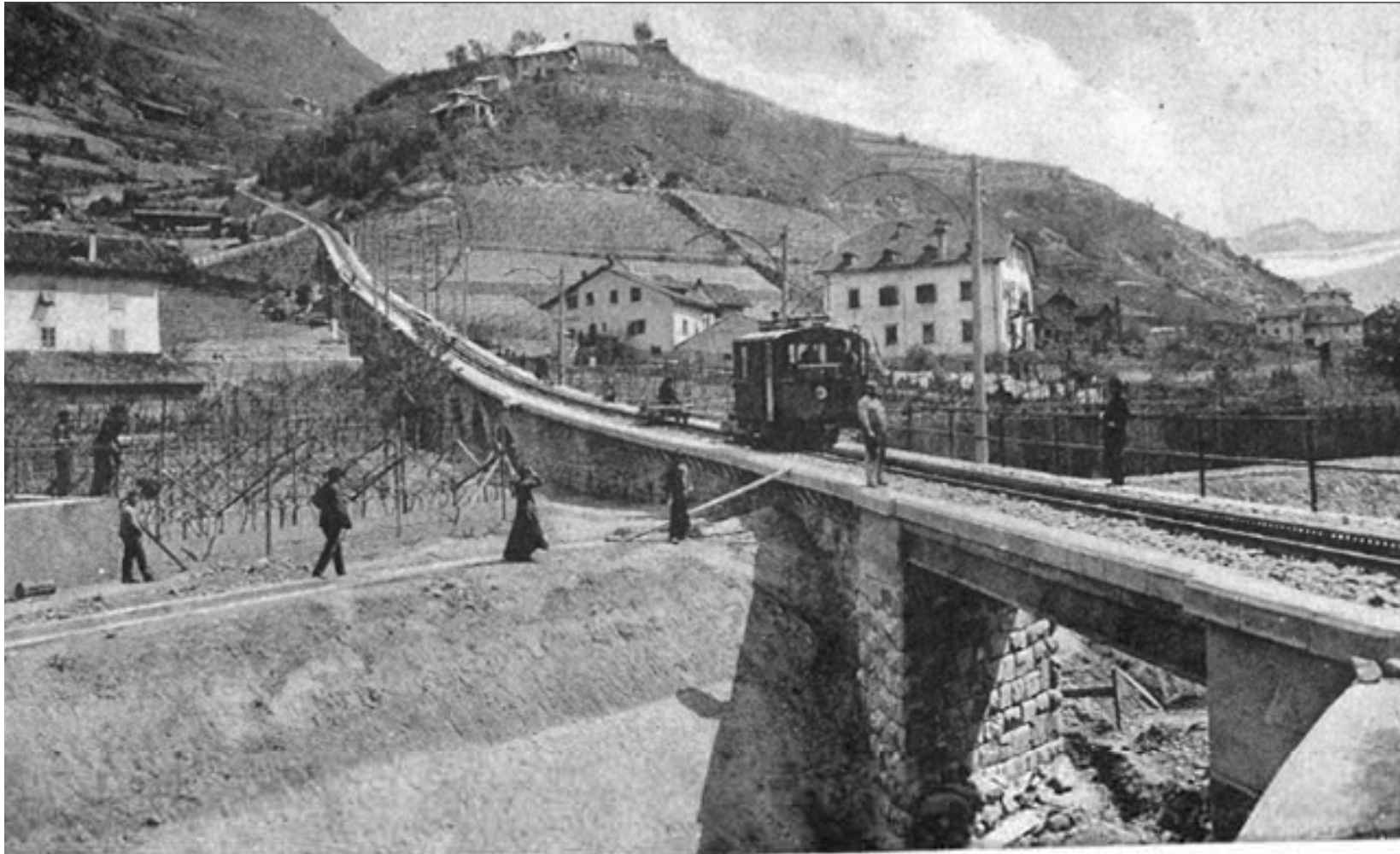
## THE HISTORICAL CONTEXT

Rack-and-Pinion Railway 1908 - 1966



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Rack-and-Pinion Railway 1908 - 1966



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## Rack-and-Pinion Railway 1908 - 1966



# HISTORICAL CONTEXT

Tramway 1966 - 2007



## WHY 3S?

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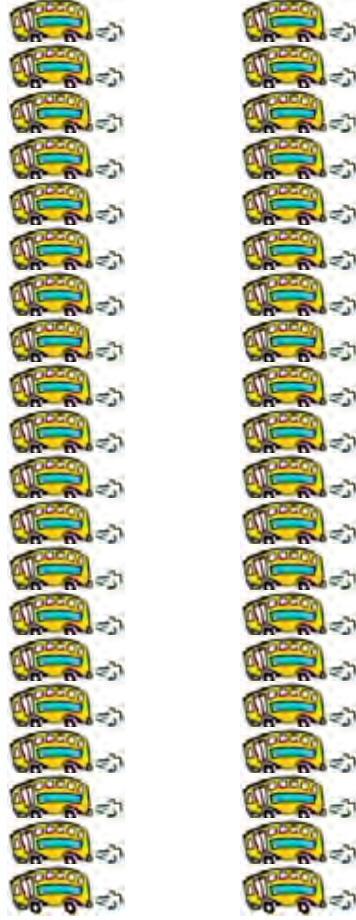
Increase of capacity

## WHY 3S?



Previous capacity 250 p/h

about 40 busses daily



about 88 busses daily



Required capacity 550 p/h 735 p/h

about 120 busses daily



## WHY 3S?

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Increase of capacity

Improvement of line safety



## WHY 3S?

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## WHY 3S?

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Increase of capacity

Improvement of line safety

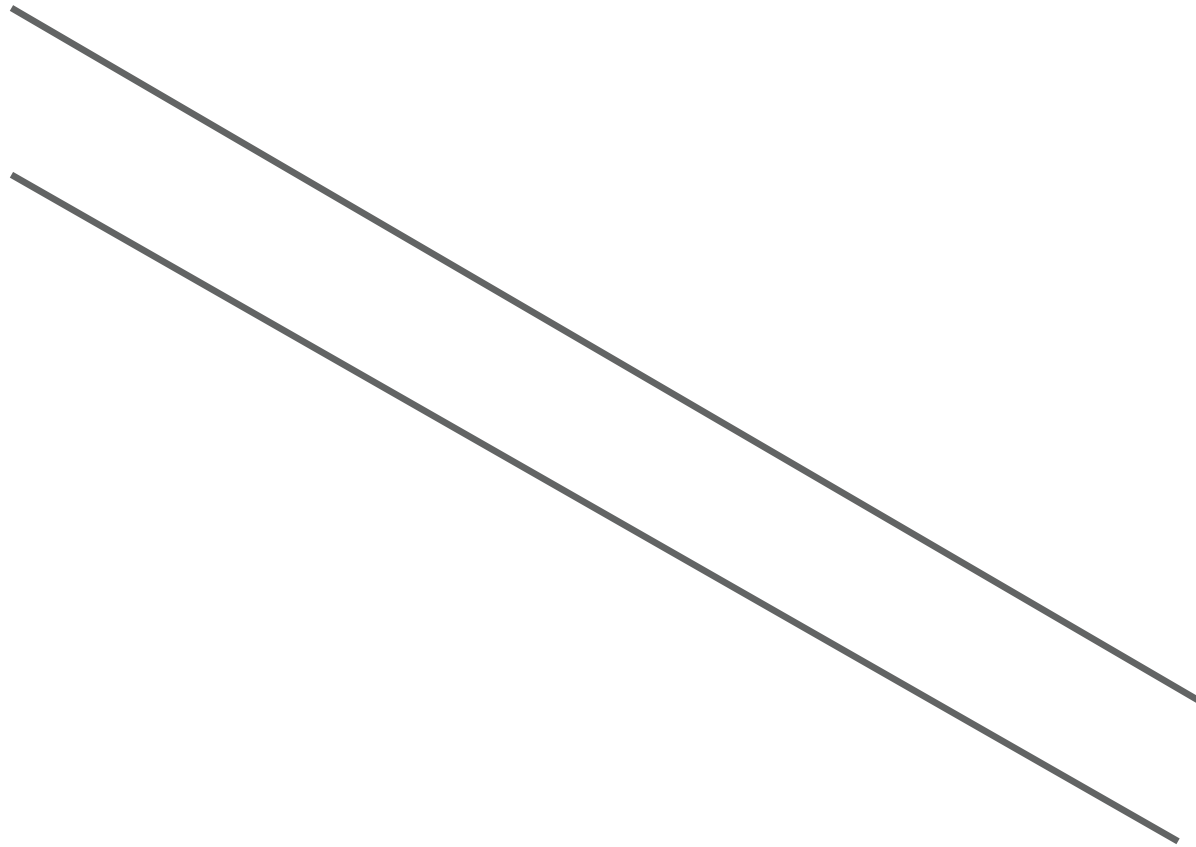
High frequency

# WHY 3S?

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Top Station



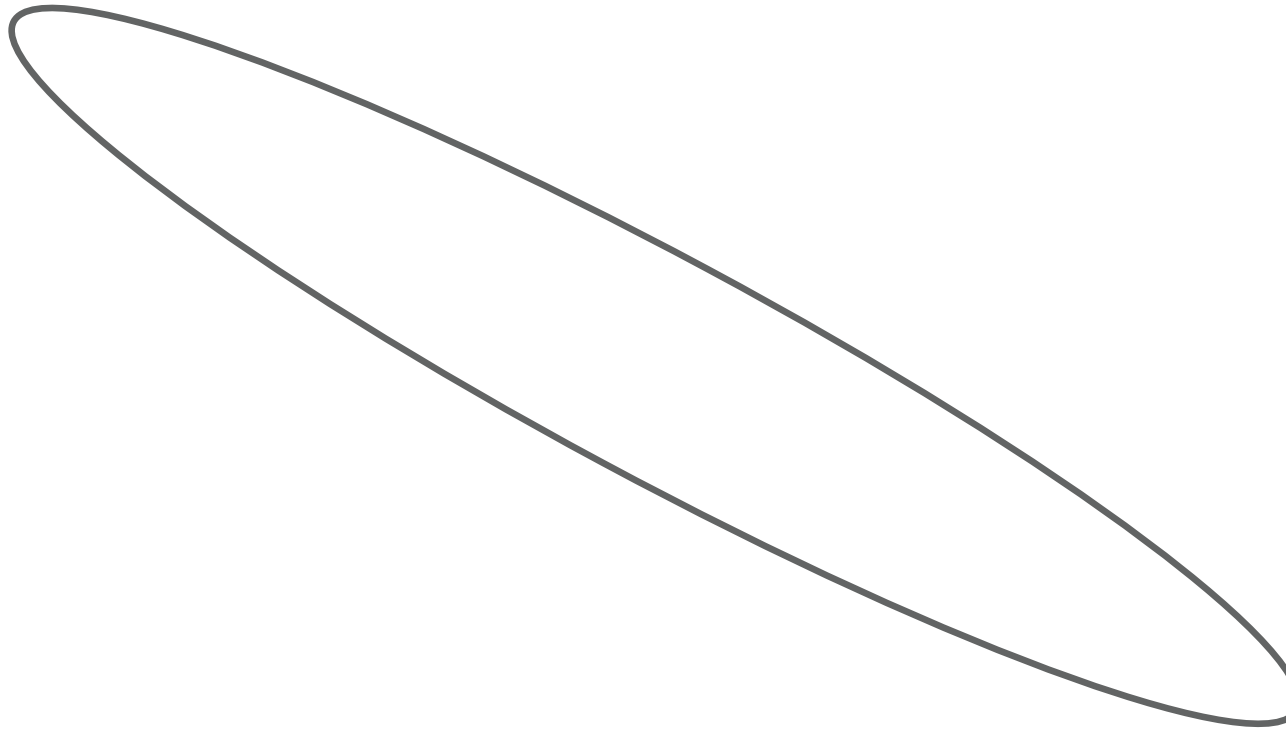
Bottom Station

# WHY 3S?

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Top Station



Bottom Station



## WHY 3S?

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Increase of capacity

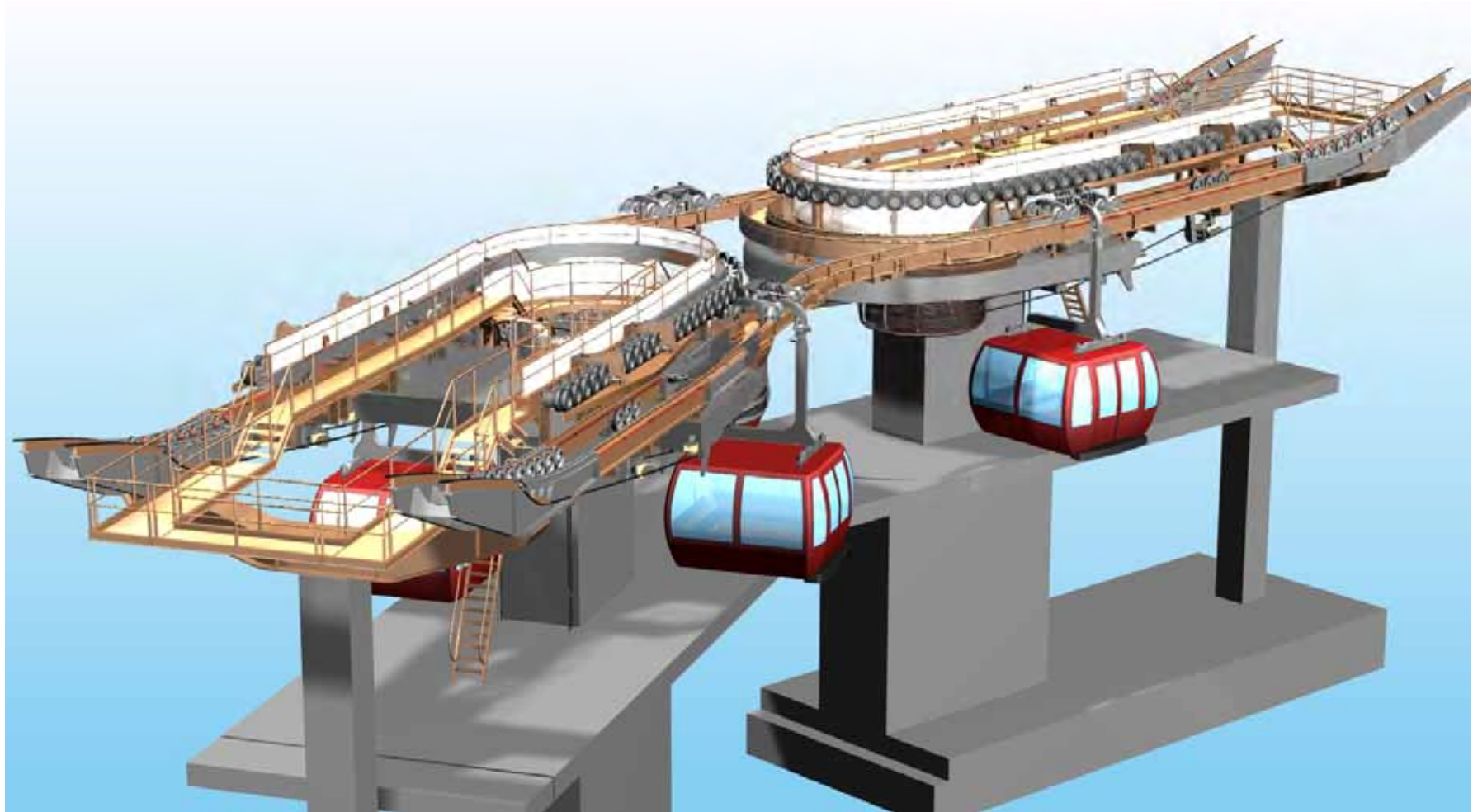
Improvement of line safety

High frequency

Possibility of line extension

## WHY 3S?

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## WHY 3S?

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Increase of capacity

Improvement of line safety

High frequency

Possibility of line extension

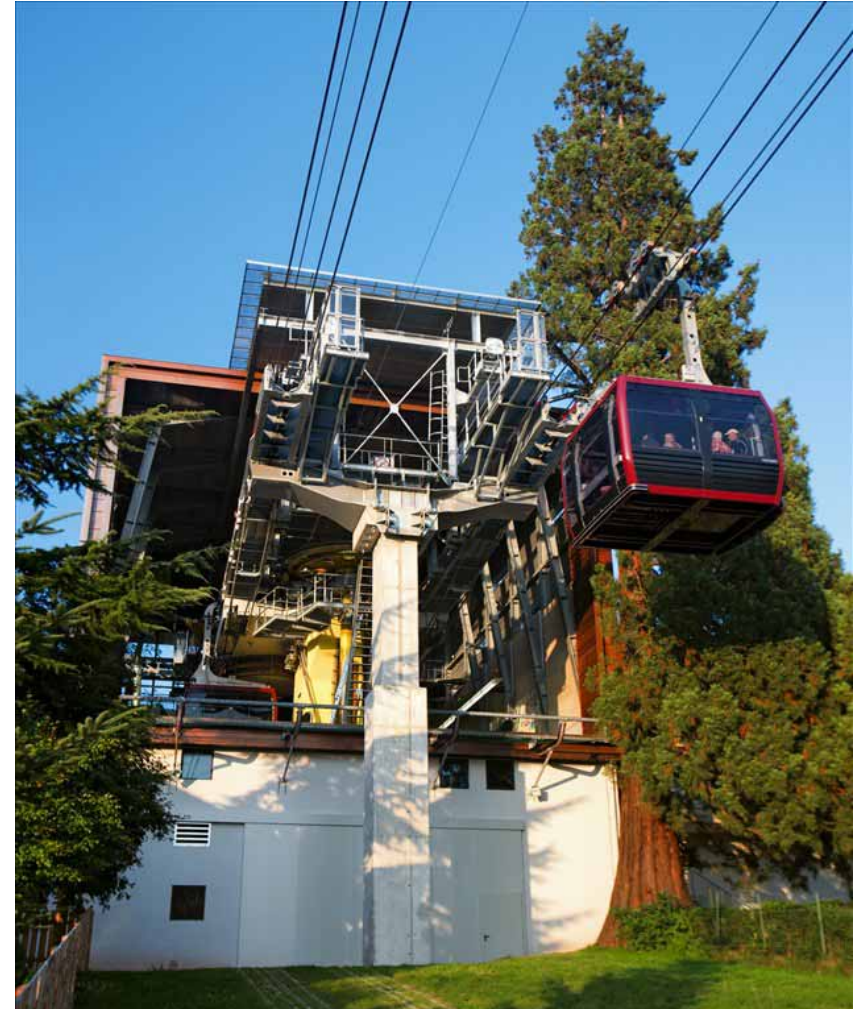
Limited station dimensions

# WHY 3S?

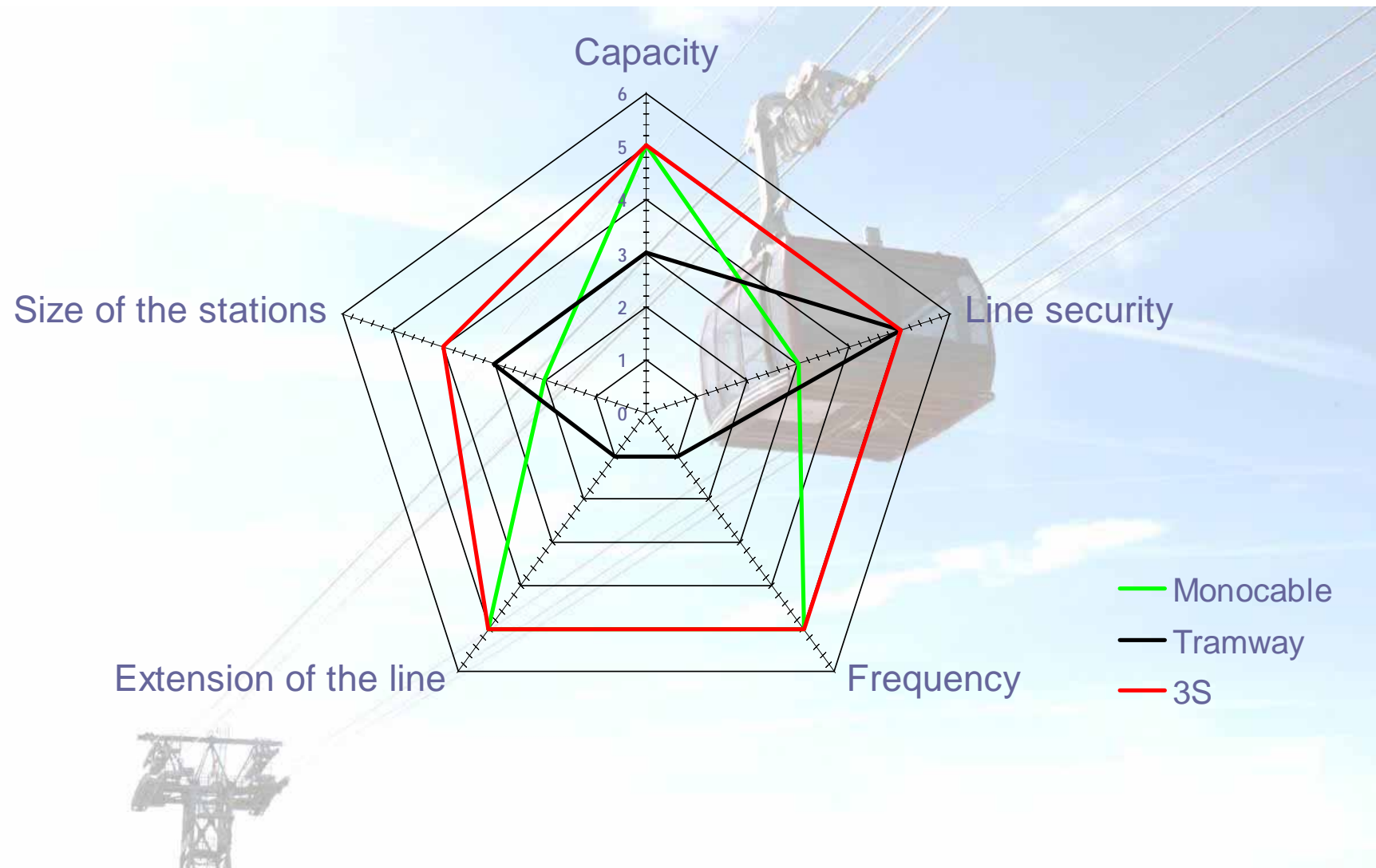




# WHY 3S?



## WHY 3S?



## THE PPP (Private – Public – Partnership)



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## THE PPP (Private – Public – Partnership)

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## THE CONSTRUCTION

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## THE CONSTRUCTION

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## THE CONSTRUCTION





## THE CONSTRUCTION

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## OPENING – 23th May 2009

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## THE TECHNOLOGY – TECHNICAL DATA

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▪ Drive station	on the top
▪ Return station	at the bottom
▪ Horizontal length	4.379 m
▪ Vertical rise	949 m
▪ Capacity	550 P/h
▪ Number of cabins	8 - 35 persons (28 seated)
▪ Designed capacity	735 P/h (with 10 cabins)
▪ Travel time	approx. 12 min
▪ Departure interval	approx. 4 min
▪ Line speed	3 – 7 m/s
▪ Installed power	2 x 350 kW
▪ Numbers of towers	7
▪ Diameter of carrying rope	4 x 46 mm (anchored)
▪ Diameter of hauling rope	40 mm (anchored)
▪ Storage	in the stations (4 in the top station and 4 in the bottom station)

## THE TECHNOLOGY – RESCUE SYSTEM

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## THE TECHNOLOGY – RESCUE SYSTEM

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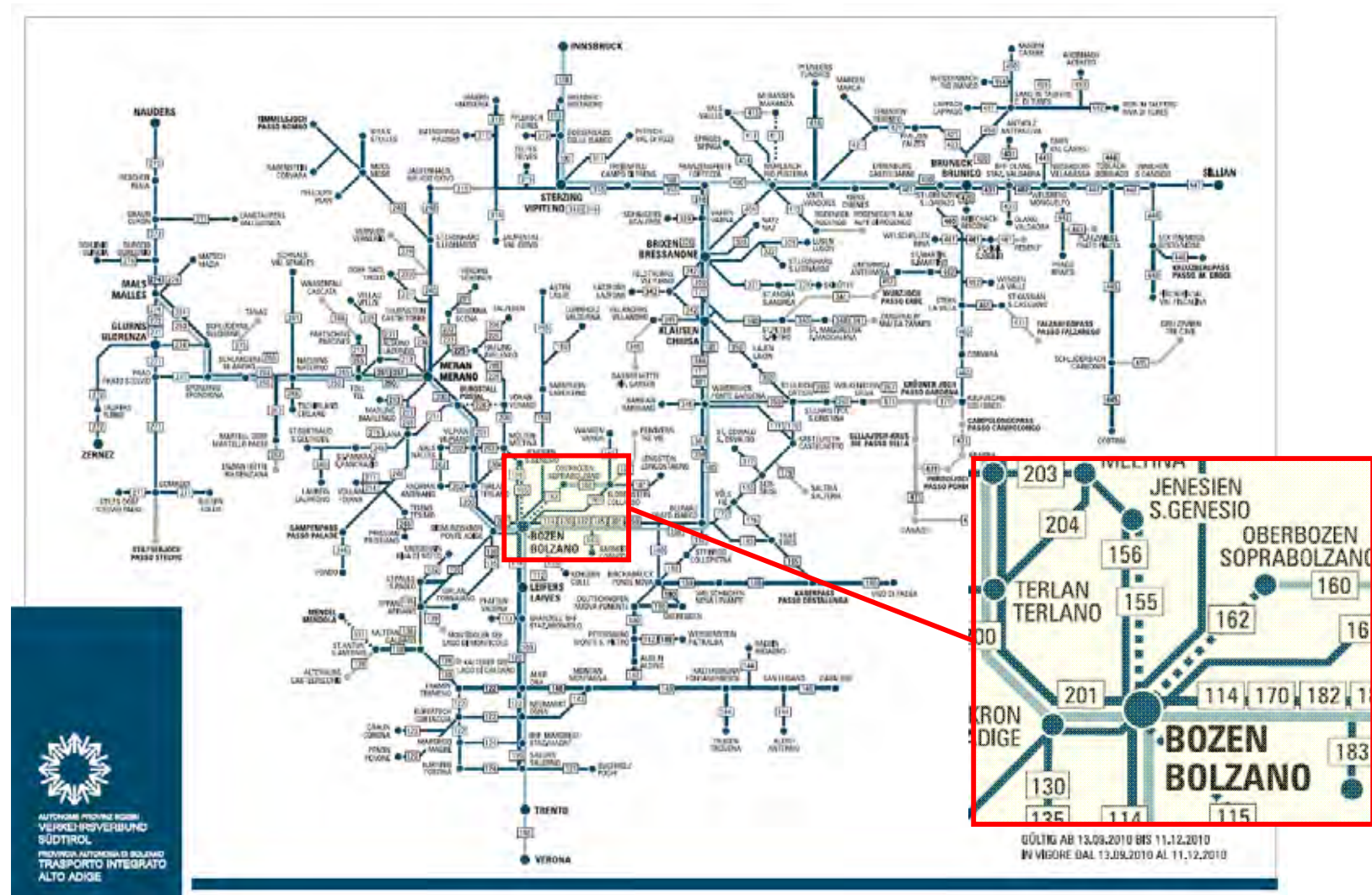


## THE TECHNOLOGY – RESCUE SYSTEM

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# THE OPERATION





## THE OPERATION

# 162 SEILBAHN RITTEN FUNIVIA RENON



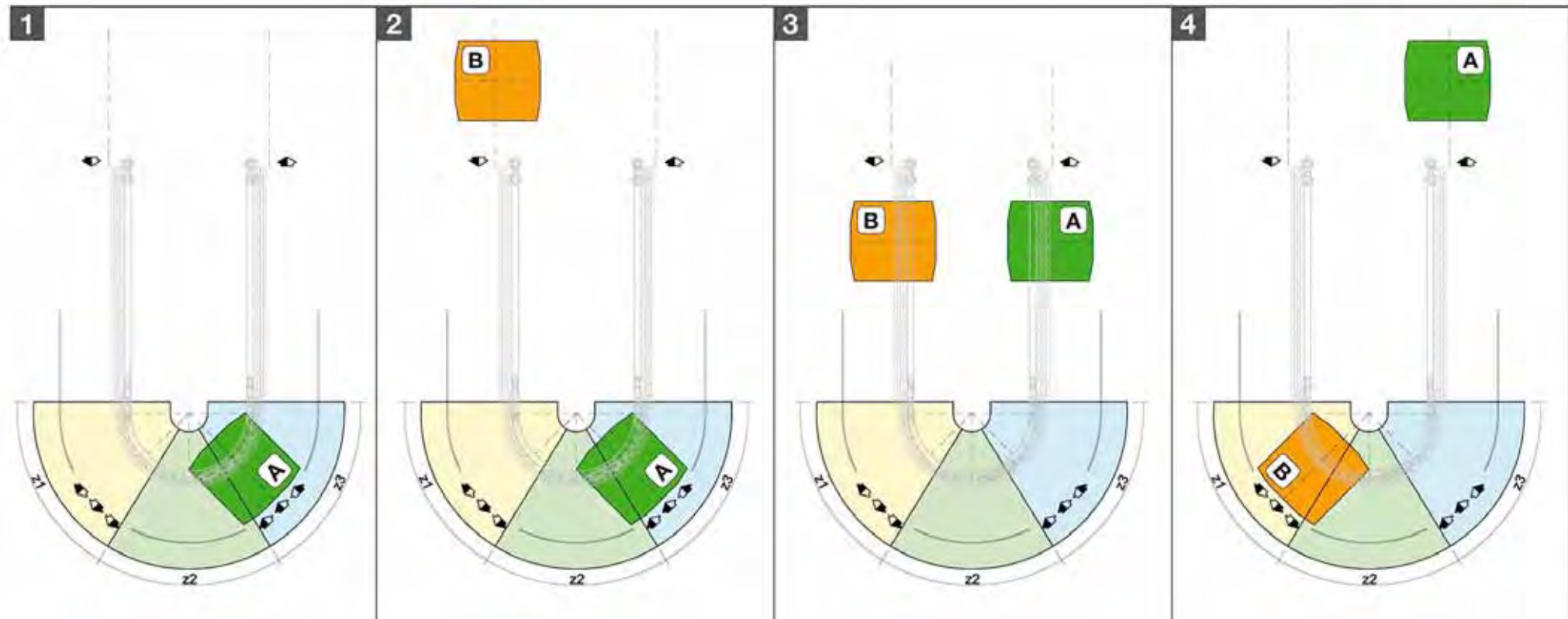
Werktag					Giorni feriali				
Durchgehender Betrieb	06.30	—	21.00						Orario continuato
Fahrten um	21.12		21.24	21.36	21.48				Corse alle ore
Letzte Fahrt um	22.38 (Ankunft /arrivo h. 23.00)								Ultima corsa alle ore
Sonn- und Feiertage					Giorni festivi				
Durchgehender Betrieb	07.10	—	21.00						Orario continuato
Fahrten um	21.12		21.24	21.36	21.48				Corse alle ore
Letzte Fahrt um	22.38 (Ankunft /arrivo h. 23.00)								Ultima corsa alle ore

FAHRTDAUER / TEMPO DI PERCORRENZA 12 MIN.

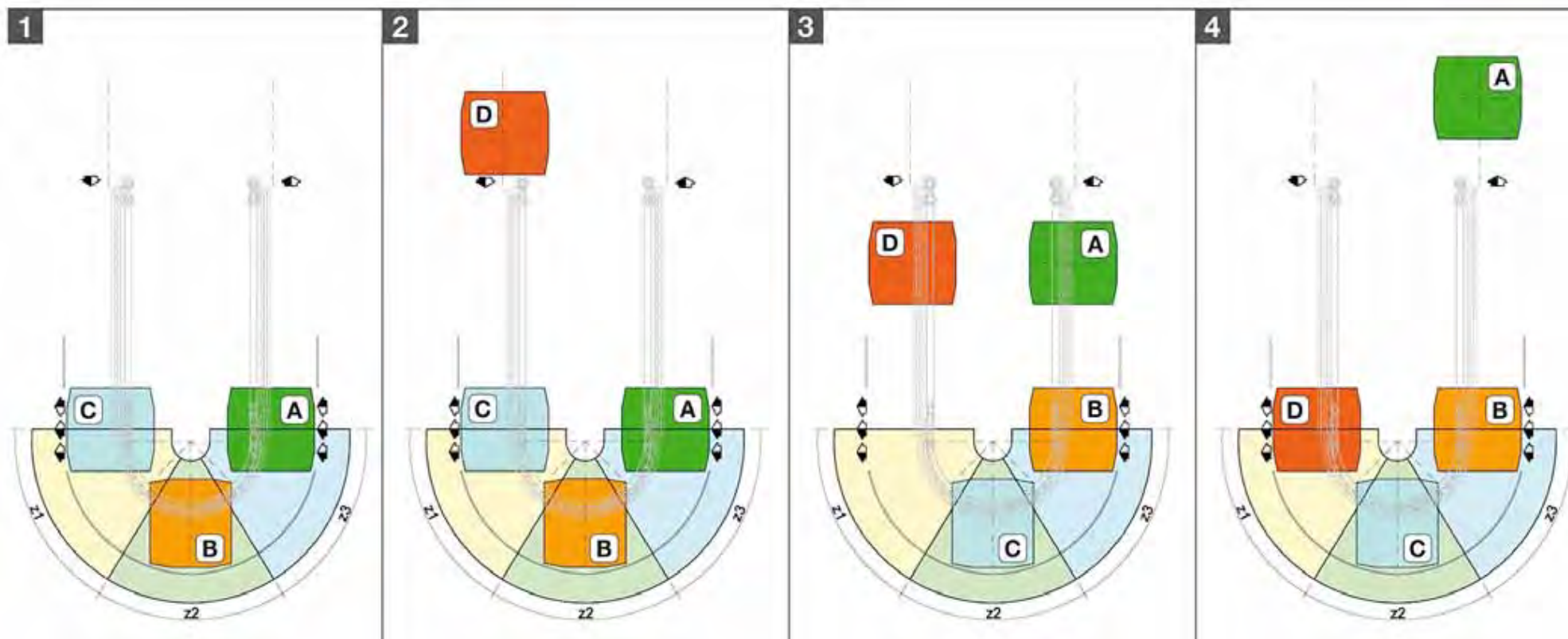
# THE OPERATION



## THE OPERATION – REGULAR OPERATION



## THE OPERATION – REDUCED OPERATION



## THE ARCHITECTURE

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## THE ARCHITECTURE

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## THE ARCHITECTURE

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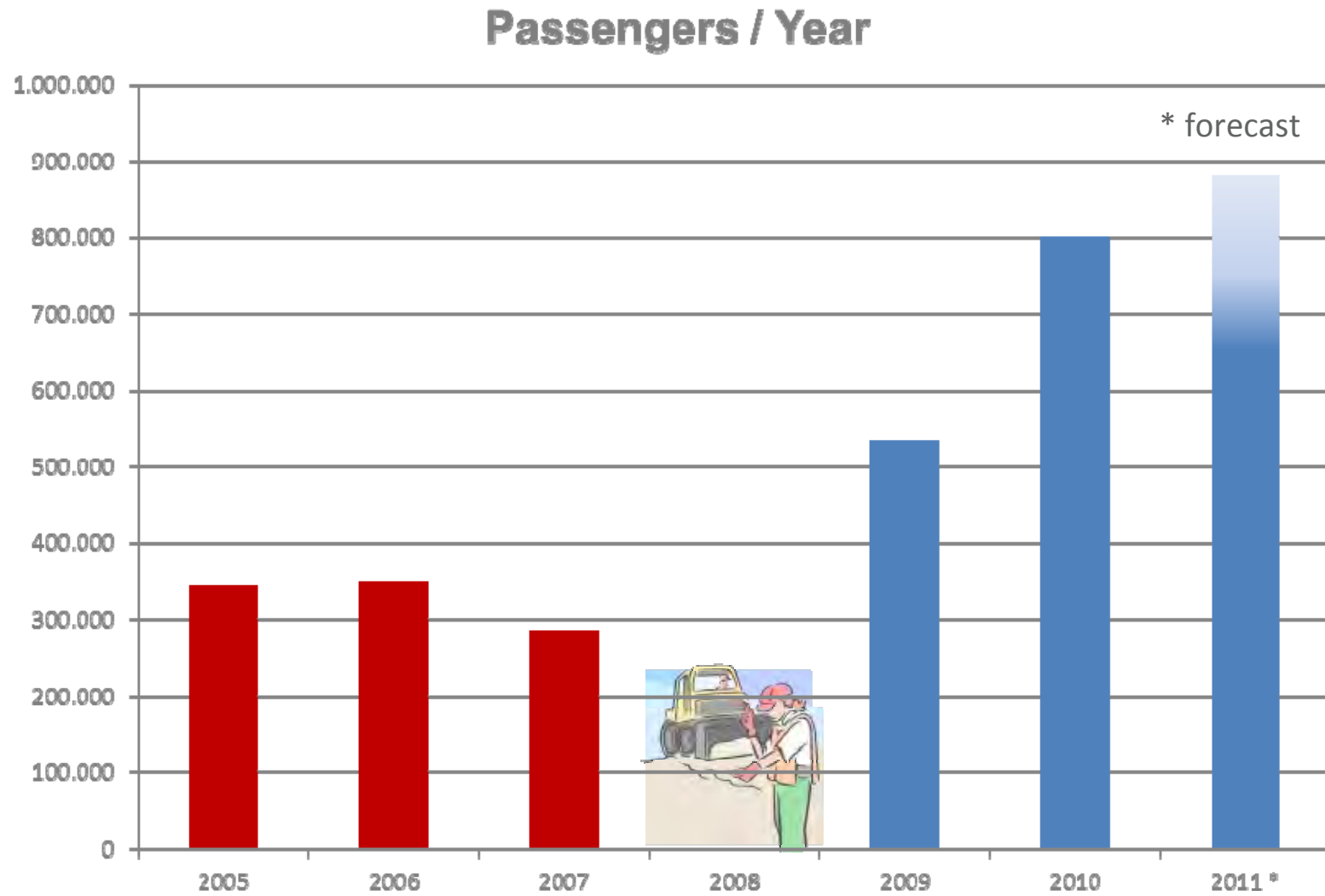


## THE ARCHITECTURE

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## “THE” SUCCESS STORY - PASSENGERS



## “THE” SUCCESS STORY - TECHNOLOGY

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Innovative



Comfortable



Safe



Flexible



## “THE” SUCCESS STORY - THE SOCIO-URBANISTIC IMPROVEMENT

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## “THE” SUCCESS STORY - THE SOCIO-URBANISTIC IMPROVEMENT





Thank you for your attention..

