



Ökosystem Schweizer Luftfahrt – Droht der Blindflug?

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CH is one of the most connected countries with air transportation system serving as bridge to the world



Switzerland among the most connected economies & societies (e.g., exports represent 53% of GDP, ~10'000 MNCs have a base here)



Air transportation system as key enabler of the high connectivity: 55+M passengers & 690+kt freight travelled through Swiss airports in 2017



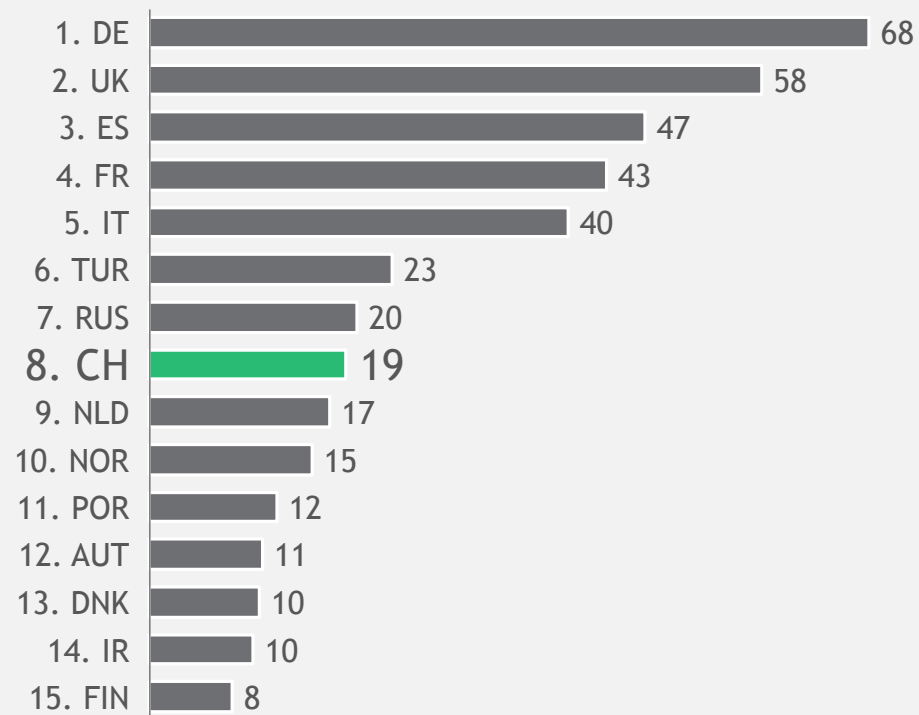
Swiss air transportation ecosystem has been very successful thanks to strong catchment areas, the distinct positioning of the three national airports, & strong home carrier



Switzerland among the countries with best air connections

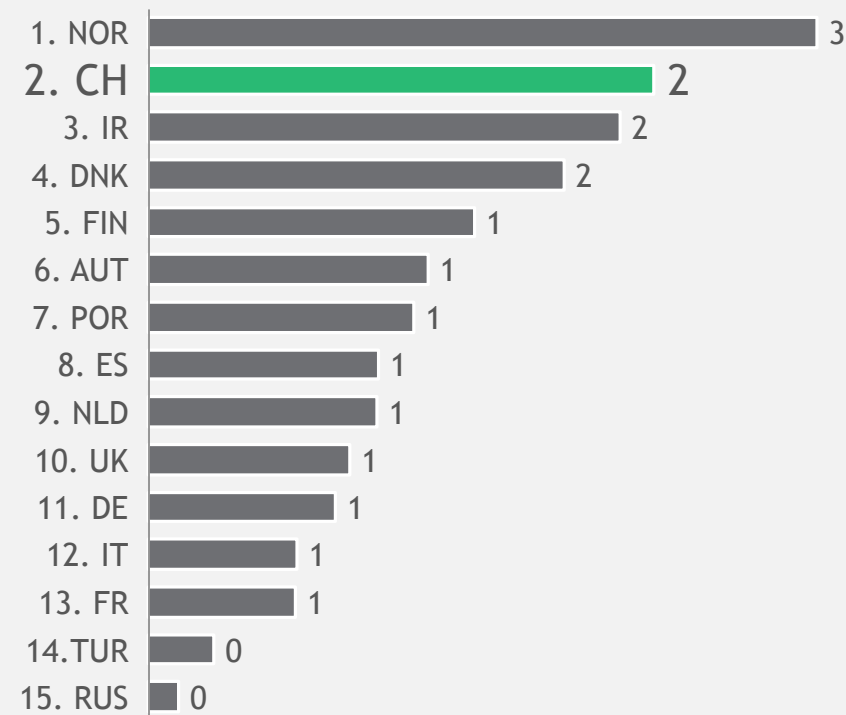
Switzerland is #8 in airport connectivity in Europe in 2017...

Airport connectivity 2017 (k)¹



... reaching even #2 when accounting for population size

Airport connectivity per habitant 2017 (10⁻³)²



1. Airport connectivity is the quality-weighted (i.e., connecting times & detour involved) number of connections from the origin airport 2. Airport connectivity divided by the country population

Source: Airport industry connectivity report 2017



Air transportation system's attractiveness depends on a functioning ecosystem

Relationship airport & airline
as key element of the airport ecosystem

State



- Air transport regulatory framework
- Tax & subventions
- Customs

Airports



- Infrastructure
- Passengers services
- Airlines services

Positioning



- P2P
- Hub

Airlines



- Business model
- # direct destinations
- # connections



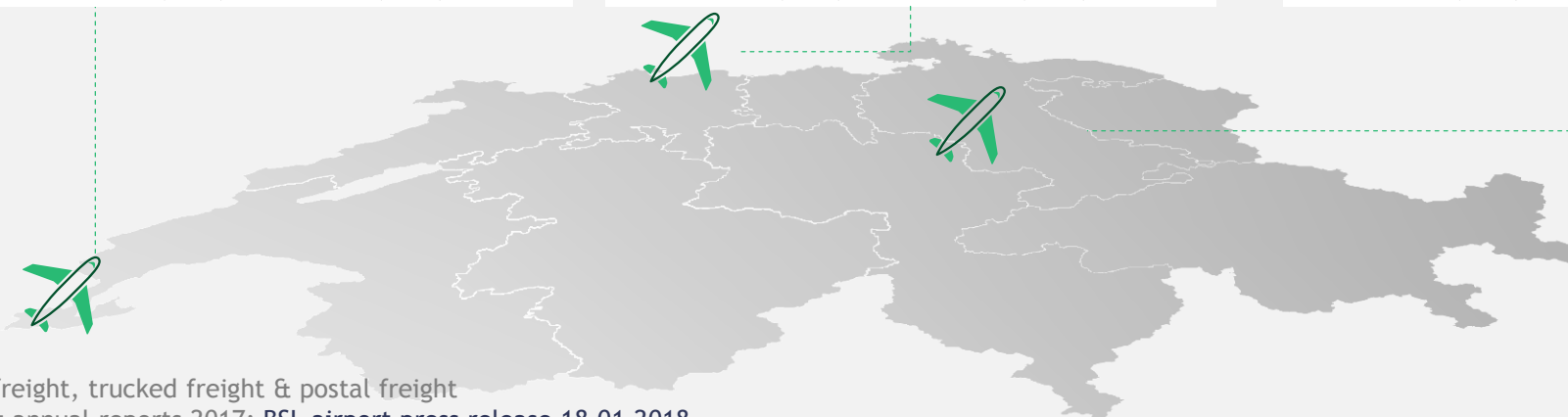
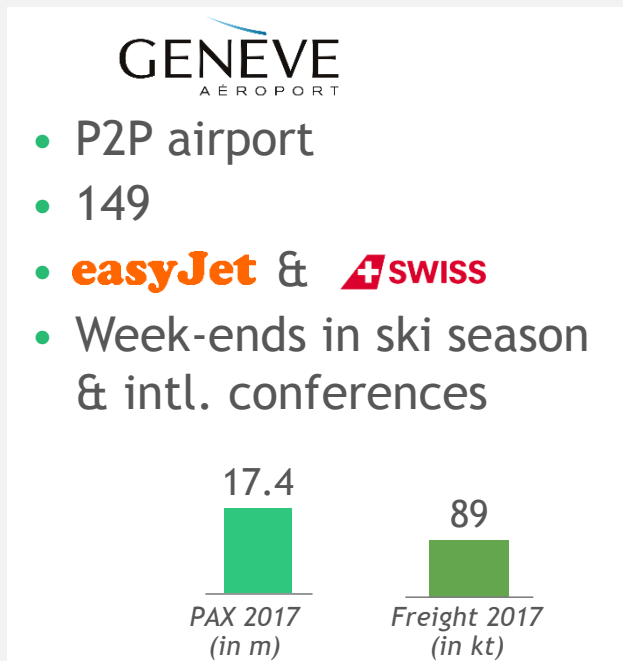
Three national airports enable high connectivity

Business model

Destinations

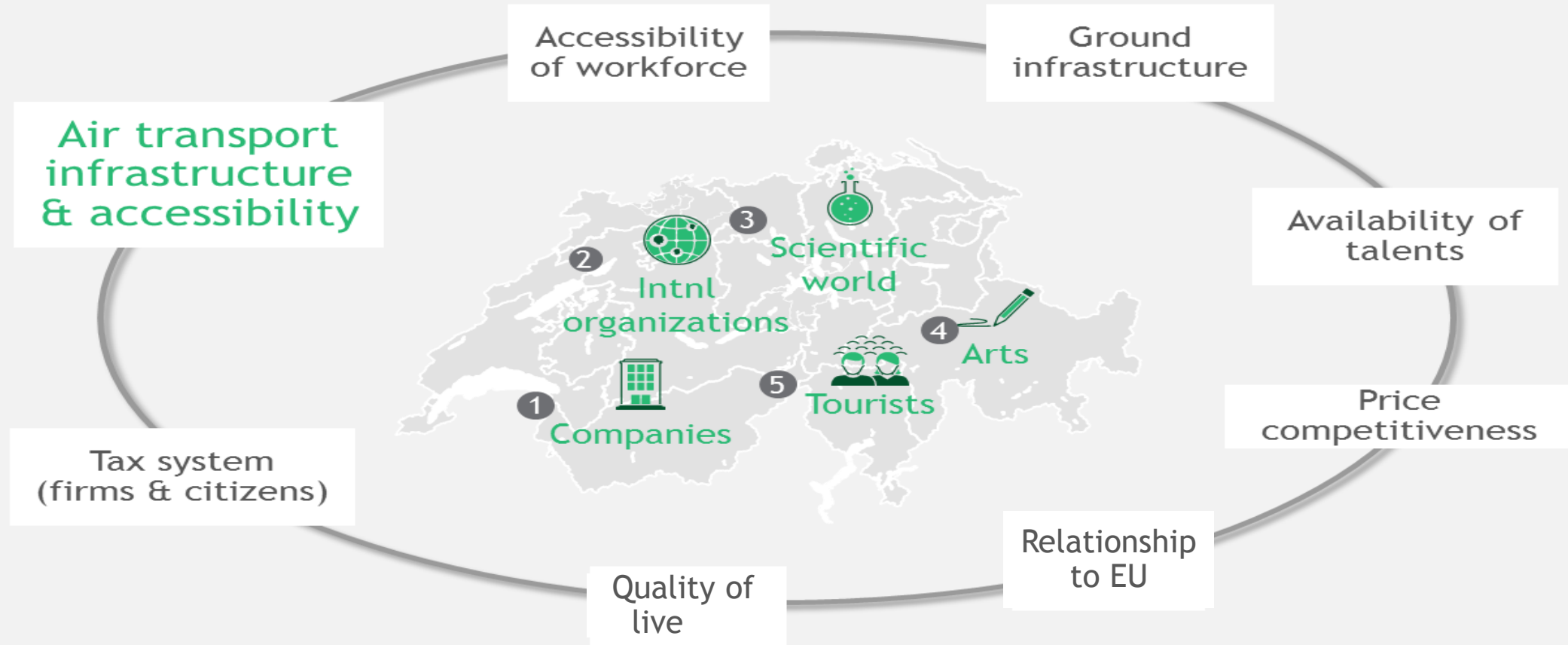
Main airlines

Peak times



Note: Freight includes airfreight, trucked freight & postal freight
 Source: ZRH & GVA airport annual reports 2017; [BSL airport press release 18.01.2018](#)

Non-monetary factors: Airports are a key factor to strengthen the location Switzerland in general



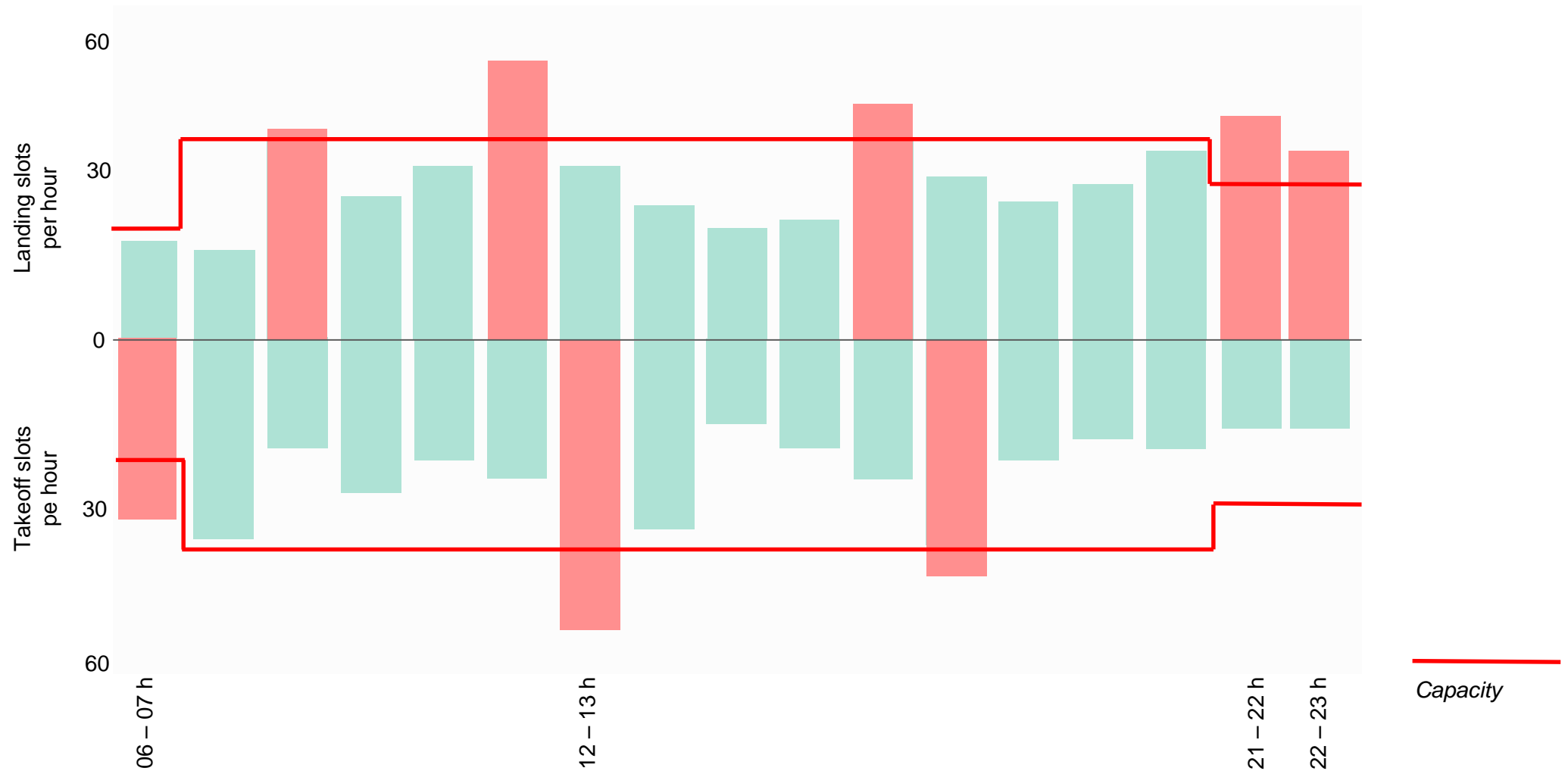
Source: Travel & tourism competitiveness report 2017; CS Standortattraktivität Index; BCG analysis

Urgency to act increases

- 1 **Demand forecasted to grow (PAX & freight) at 2-3% per year (+~23M PAX /+ ~130kt freight in 2030)**
- 2 **National airports already operating at maximum capacity at peak hours while development plans very slow to implement (~10 years) due to intense political discussions**
- 3 **International competition between hubs growing with airports strongly investing to be able to meet future demand and capture upside of increasing transit passengers**

If no action is taken, Switzerland is putting in danger not only the airport ecosystem, but the overall attractiveness of Switzerland

During Peak Hours at Zurich Airport, the Demand for Takeoff and Landing Slots Exceeds Supply



Sources: Airport of Zurich; BCG analysis.



... leading to numerous challenges threatening the development & functioning of the hub

- **Limited development potential for new direct long haul destinations** (as they need capacity in peak hours) that are economically the most relevant for Switzerland
- **Risk of missing airlines investments**, which are only done with significant growth perspectives, jeopardizing the future of the ZRH hub
- **Numerous delays** with 22% of flights having more than 15mn of delay threatening the hub functioning as connecting time is key to ensure connection

As European Hubs Increase Their Capacity, the Pressure on Zurich Airport Builds

Airport	Number of passengers (millions)	Current capacity (movements/h)	Planned capacity (movements/h)	Change (%)
Charles de Gaulle	69.5	104	120+	+15
Frankfurt	64.5	98	126	+29
Munich	44.6	90	120	+33
Copenhagen	30.4	83	83	0
Zurich	29.4	66	66	0
Brussels	24.8	74	90	+22
Vienna	24.4	68	90+	+32
Milan-Malpensa	22.2	70	89	+27

Sources: Press analyses; Albatross; BCG analysis.

Note: Any apparent discrepancies in calculations are due to rounding. Data on the number of passengers at each airport is current as of 2017. Data on current and planned capacity is based on a 2015 study conducted by the International Air Transport Association.

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ZRH currently in no position to respond to demand increase - recent "solutions" only fix current issues and will take years to implement

SIL II offering solutions to current issues at ZRH airport allowing....

- Runway extensions to stabilize the operating system
- South start in times of bise (not fog!!) to maintain max. numbers of tracks in all weather

However, additional eight years until implementation as

- Solutions have to be requested to be integrated in the ZRH airport operating rules
- Some solutions might be submitted to voting

... and SIL II still does not solve mid term capacity shortage



"Der Bundesrat hat am Mittwoch den neuen Sachplan Infrastruktur Luftfahrt (SIL) festgelegt. Südstarts sind bei Bise oder Nebel erlaubt, geplant sind auch Pistenverlängerungen. Was erwartet Zürich nun?"

"Die Zürcher Regierung nimmt Stellung zu den Plänen des Bundes zum Flughafen Zürich: Sie akzeptiert Pistenverlängerungen, Südstarts geradeaus will sie aber stark limitieren."

Inaction in securing an adequate airport development leads to two potential scenarios

1

"Status quo" with current destinations still offered but airports not able to answer all additional demand

- Monetary impact of not capturing growing demand
- CH location attractiveness negatively impacted through lower connectedness to future markets

2

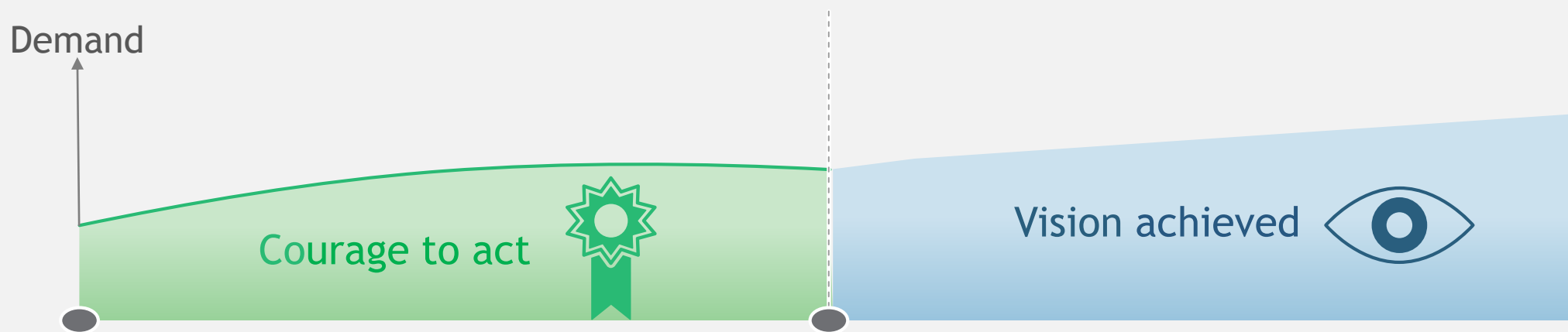
"No hub" with loss of hub for Zurich with frequency & number of direct intercontinental destinations

- Monetary impact of losing connections
- CH location attractiveness massively impacted through reduced intercontinental connectedness





To address demand in 2030, a vision needs to be defined starting as of now



2017 — Incremental improvements — 2030

• Definition of vision •

• — Implementation of vision — •

SUI meets demand increase by optimizing utilization, and defines its natl. aviation strategy

- Incremental capacity increase of air transportation system
- Operating system improvements (e.g., SIL III)
- Noise reduction

SUI realizes its strategy for a national aviation ecosystem

- Definition of best set-up for CH air transportation infra. and the business models required
- Leveraging of technological innovations
- Embedding of air transportation in a holistic transportation ecosystem perspective

A clear vision needs to be formulated through the definition of a holistic national air transportation strategy to address post 2030 demand



Definition of best set-up for CH airport infrastructure

Determine best-set up for air transportation infrastructure and the business models required

- Leverage whole air transportation infrastructure
- Distribute demand across airports when possible
- Segment airports by defining business models (e.g., ZRH as feeder for LH hubs?)



Leverage technological innovations

Support scientific research and fund innovations to improve air transportation

- Reduce noise of airplanes
- Increase plane capacity
- Decrease pollution



Embed air transp. in a holistic transp. ecosystem perspective

Use efficiently the whole transportation ecosystem (i.e., incl. ground transportation) to address demand

- Coordinate transportation strategy across all transportation means
- Leverage political process of railway to set-up process for air transportation