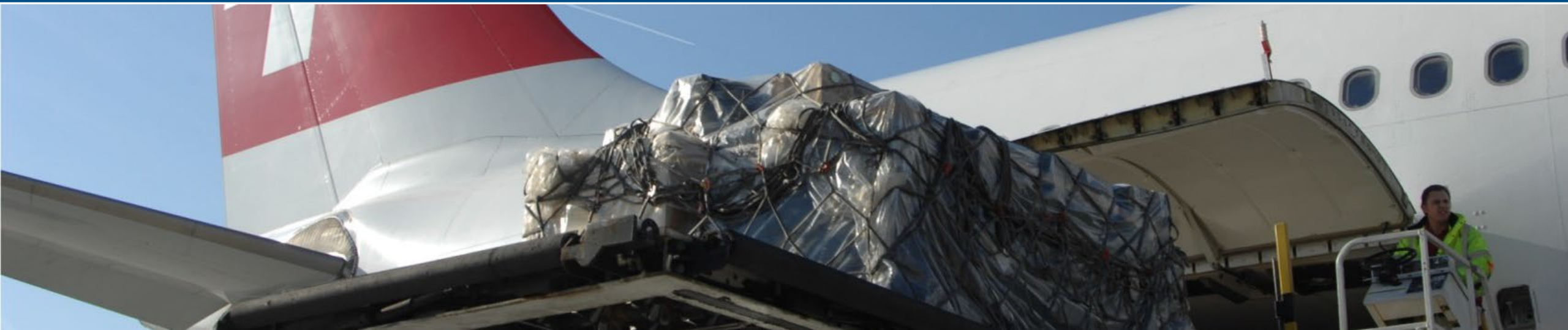




Logistics Advisory
Experts GmbH



Total Cost-Optimization in International Airfreight – Express vs. Freight

A Market Study

Victor Wildhaber, Project Manager
Prof. Dr. Wolfgang Stölzle, Managing Director
Logistics Advisory Experts GmbH

October 2020
Arbon, Switzerland

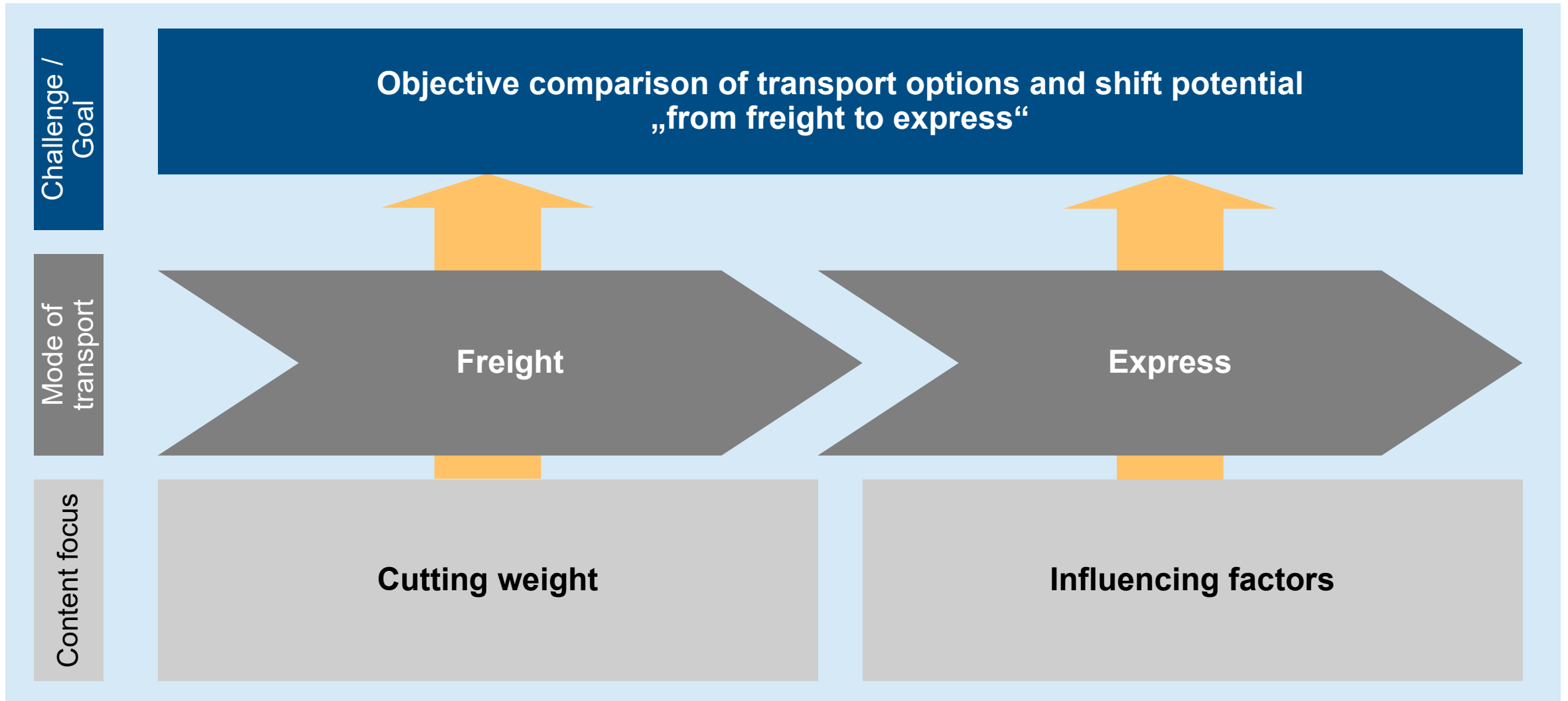
***“Practice-based,
science-driven”***

Agenda

1. Challenges and Requirements of Total Cost-Optimization in International Airfreight

2. Methodology of the Total Cost-Optimization
3. Statistical Parameters on the Airfreight Market
4. Lane-based Evaluation
5. Further Evaluations
6. Summary, Limitations and Outlook

Overview of Challenges, Focus and Analysis Approach of the Project «Total Cost-Optimization in International Airfreight – Express vs. Freight»



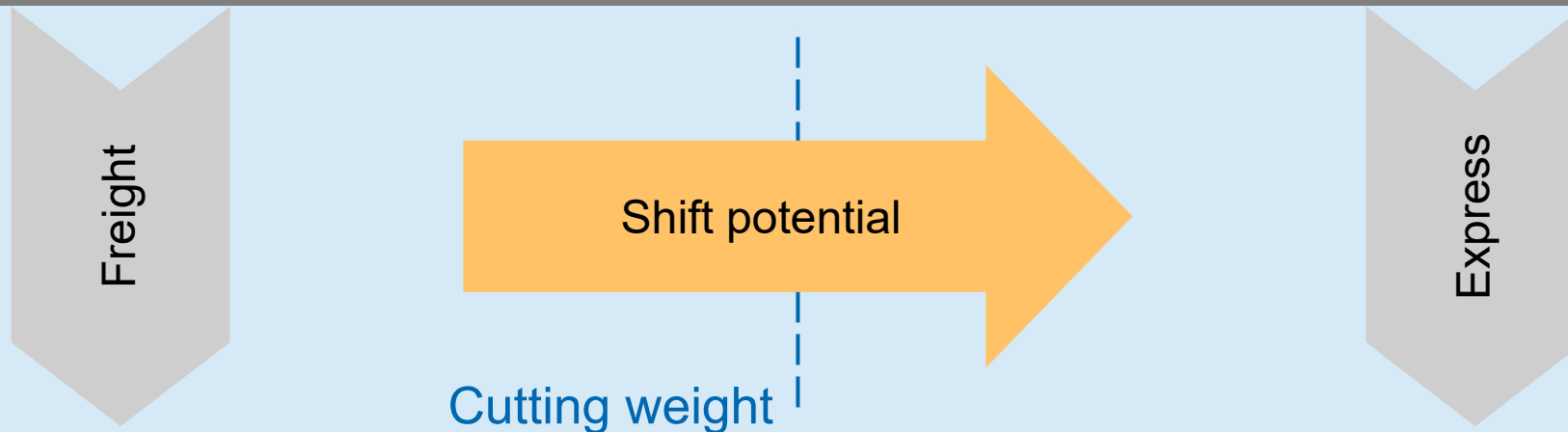
Overview of Work Packages

Objective comparison of transport options and shift potential

1 Operationalization of relevant (influencing) variables

2 Empirical survey of selected shippers

3 Evaluation of the results, interpretation and documentation



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1. Challenges and Requirements of Total Cost-Optimization in International Airfreight

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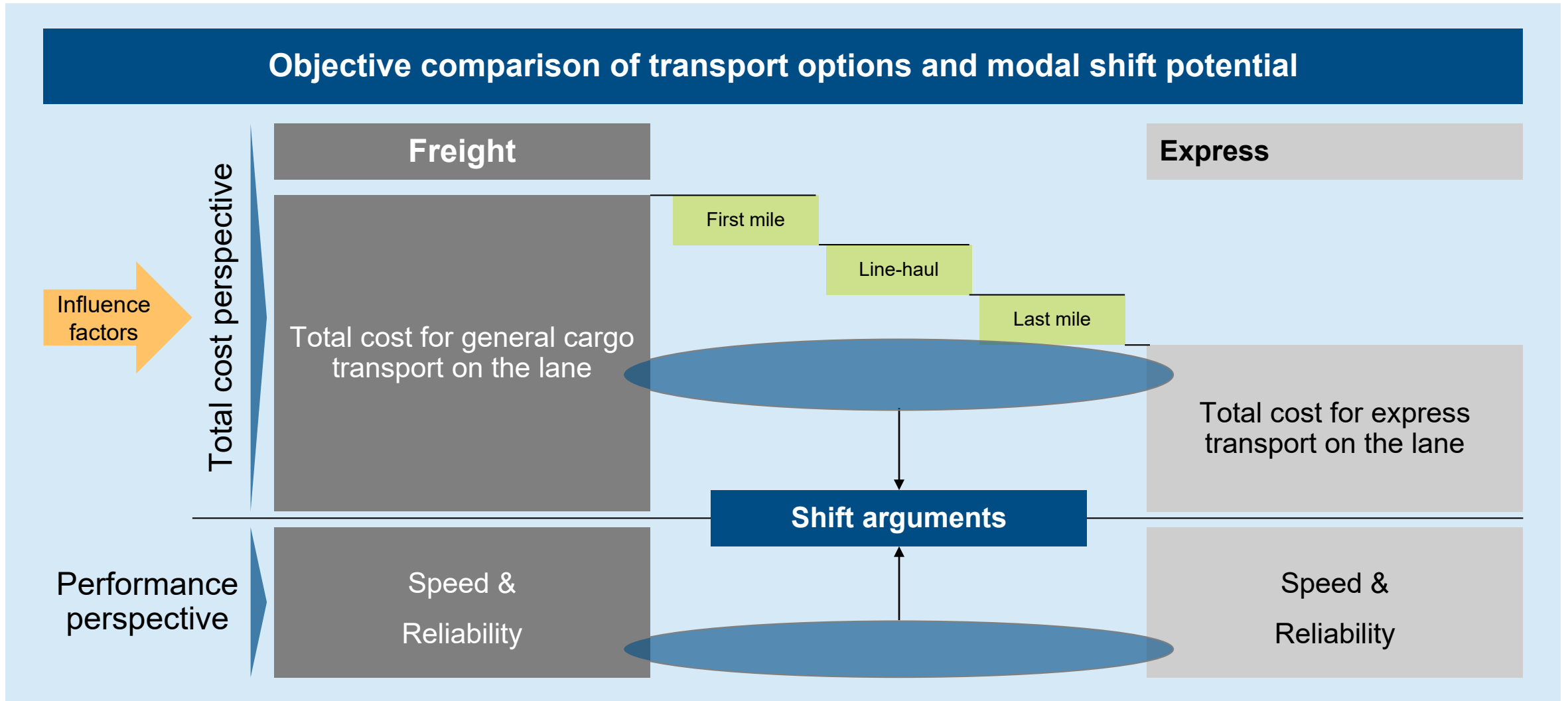
6. Summary, Limitations and Outlook

Overview of the Methods Used for Data Collection and Processing: Structured Interviews, Total Cost-Modeling and Mini Cases

Objective comparison of transport options and shift potential

Workpackages	Modules and method	Sources
1 Operationalisierung relevanter (Influence) variables	<ul style="list-style-type: none"> • Understanding and differentiation: CEP and general cargo • Choice of resilient lanes • Modeling of the total costs • Identification of relevant influencing variables 	<ul style="list-style-type: none"> • Desk Research
2 Empirical survey	<ul style="list-style-type: none"> • Creation of an interview guideline (focus on cutting weight and shift potential) • Carrying out the interviews 	<ul style="list-style-type: none"> • Structured interviews with shippers
3 Evaluation of the results, interpretation and documentation	<ul style="list-style-type: none"> • Creation of an evaluation systematic • Evaluation of the results • Calculation of the shifting potential • Interpretation of results and validation • Documentation 	<ul style="list-style-type: none"> • Total cost-model evaluation • Validation of the results in max. 3 expert interviews

The Operationalization of Relevant (Influencing) Variables Flows into the Structured Interview Guide and is Used for the Analysis the Total Costs per Transport Option



For the Evaluation of the Interviews, the Method of Open Coding According to Corbin and Strauss (1998) is Applied

- 1 **Data division** Division of the overall interview into statements.
- 2 **Phenomenon identification** Elaborate important statements that relate to the complex of themes.
- 3 **Labelling** Labeling phenomena in order to create a basis for concept and group building.
- 4 **Concept identification** Develop concepts by linking individual phenomena.
- 5 **Concept grouping** Creation of logical groupings, which are based on the created concepts.
- 6 **Category-building** Prepare categories to bundle concepts into groups.

Exemplary application of the evaluation methodology

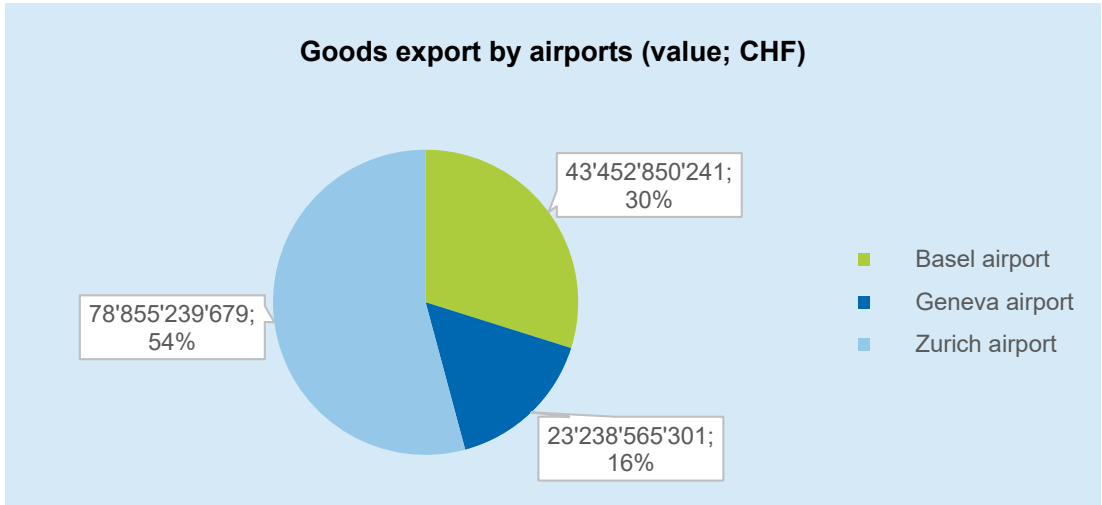
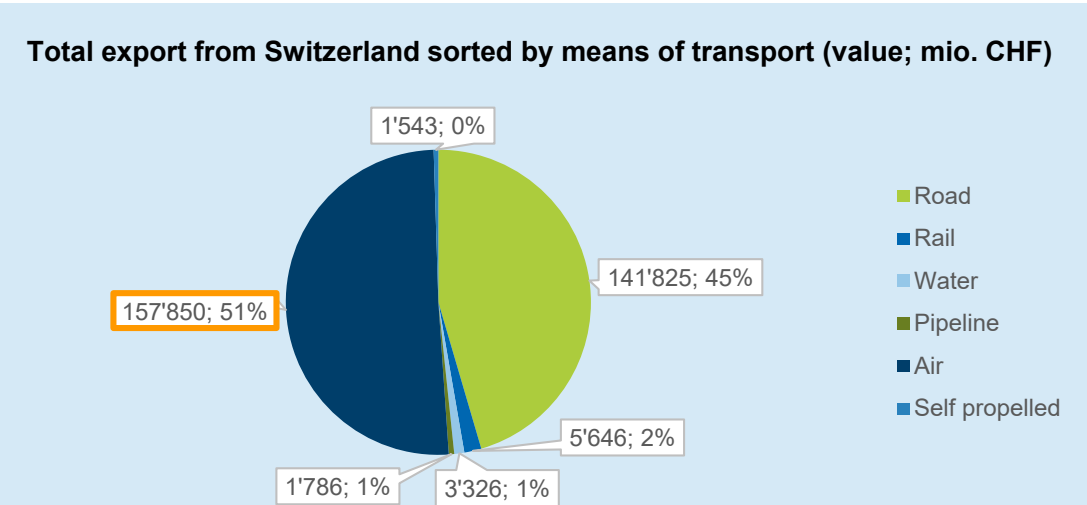
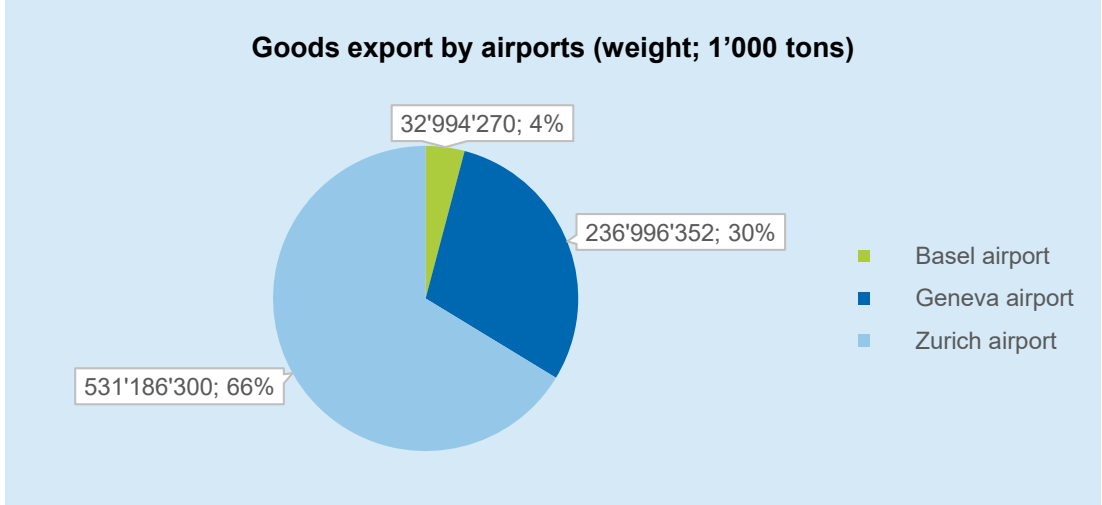
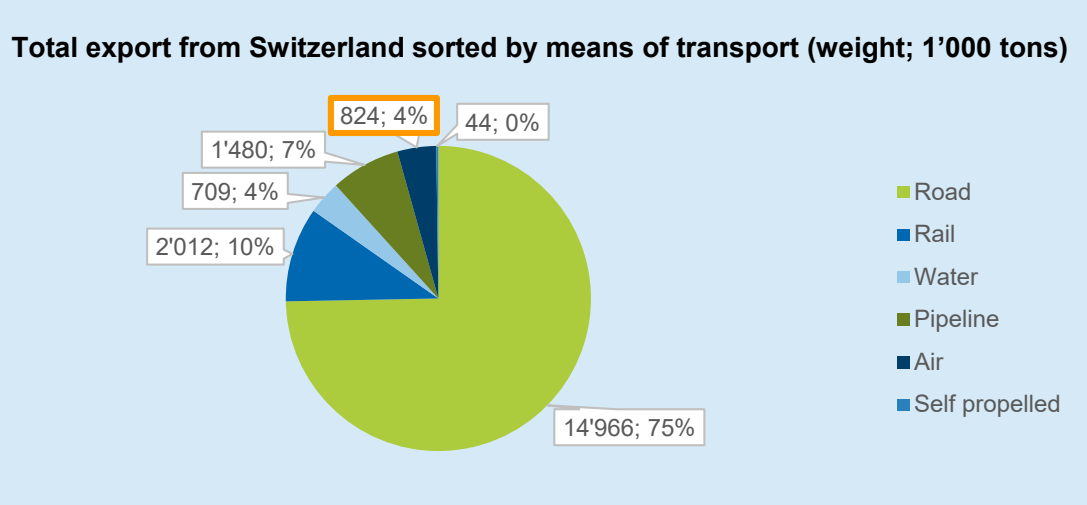
	Groups	Description	Phenomena
Digitization	Commissioning	Man-machine interface	We use various technologies (e.g. wearables) to scan parts or to allow employees to identify themselves. We also use data glasses in various warehouses.
	Transparency	Track-and-Trace	The track-and-trace system of our logistics service provider allows us to track our shipments live.
	Transparency	Traceability	In automotive logistics, the history-oriented traceability of shipments is becoming increasingly important.
Automation	Internal material flow	Autonomous floor conveyors	The use of flexible, autonomous floor conveyors in internal material flows is a critical trend..
	Yardmanagement	Autonomous Yard Vehicles	Especially in the area of delivery (yard with interface to yard management) there is a high potential for automation and autonomization (e.g. autonomous yard trucks).
	Material flows on the ramp	Autonomous floor conveyors	Autonomous unloading and shipment preparation systems are in demand and will be used more often in the future.

Source: Corbin & Strauss (1998)

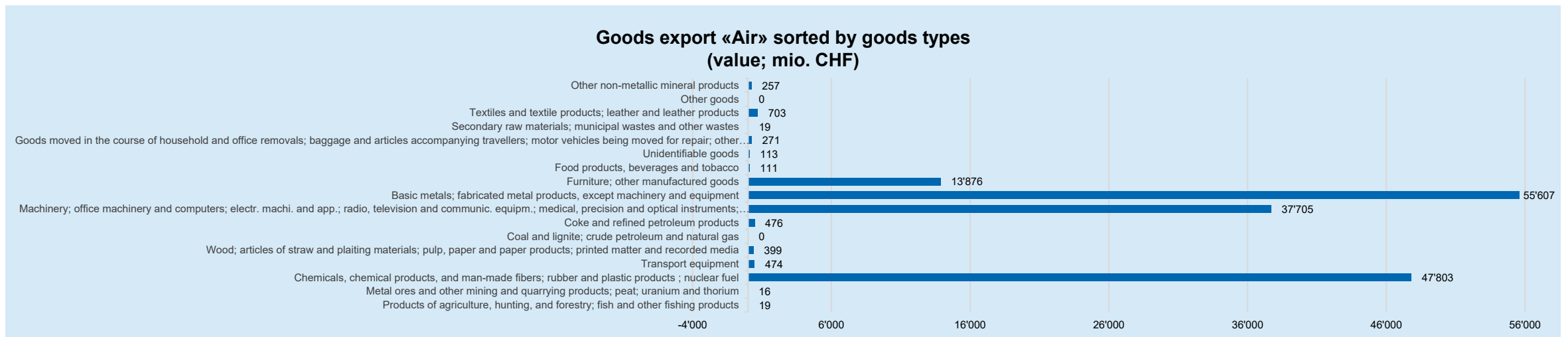
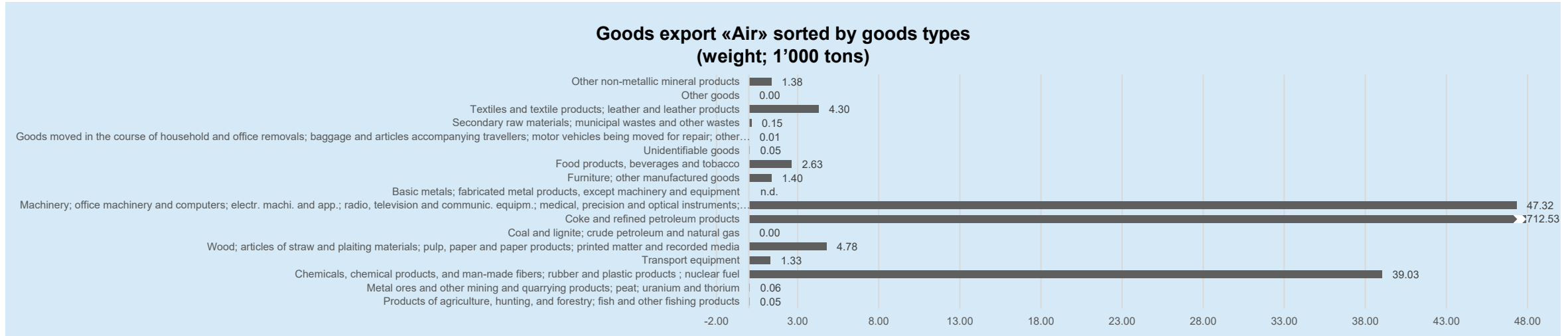
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1. Challenges and Requirements of Total Cost-Optimization in International Airfreight
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Statistical Airfreight Market Information Regarding the Export – Transport Means and Airports (2019)

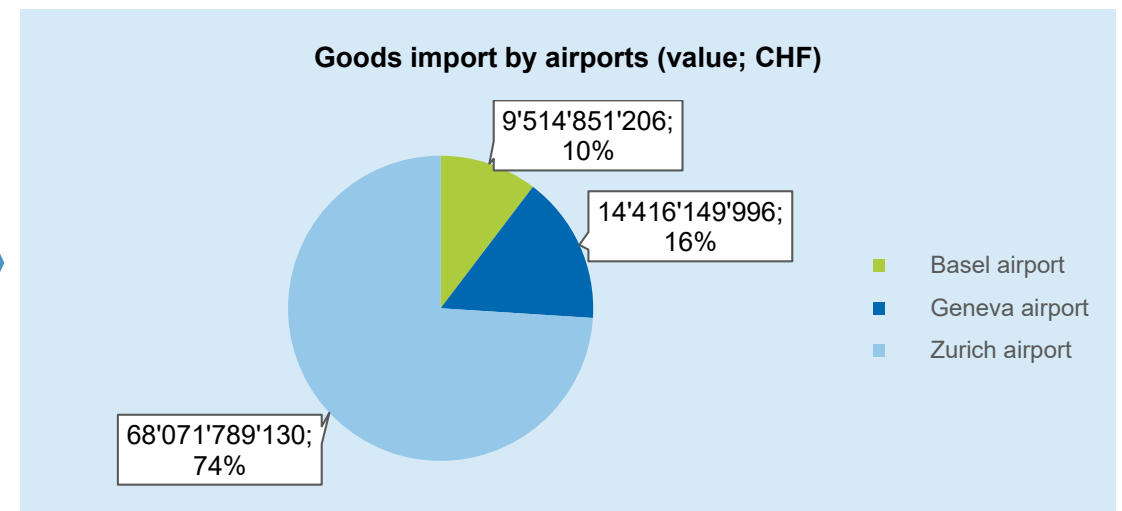
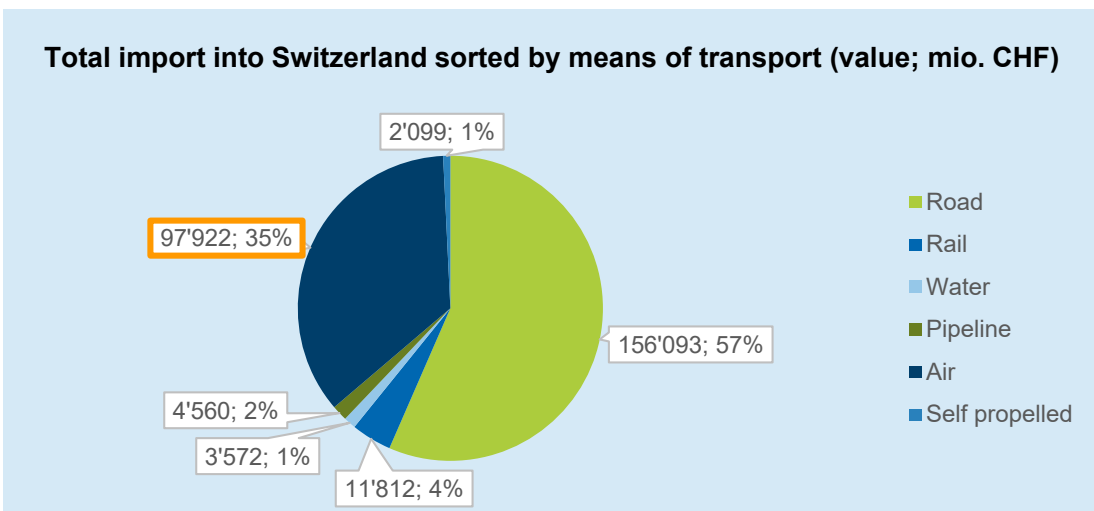
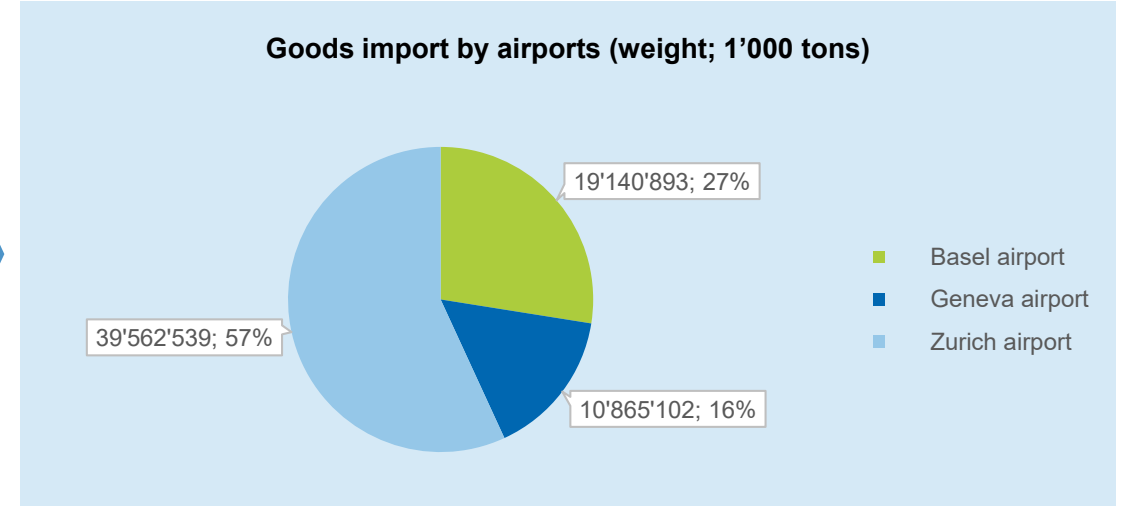
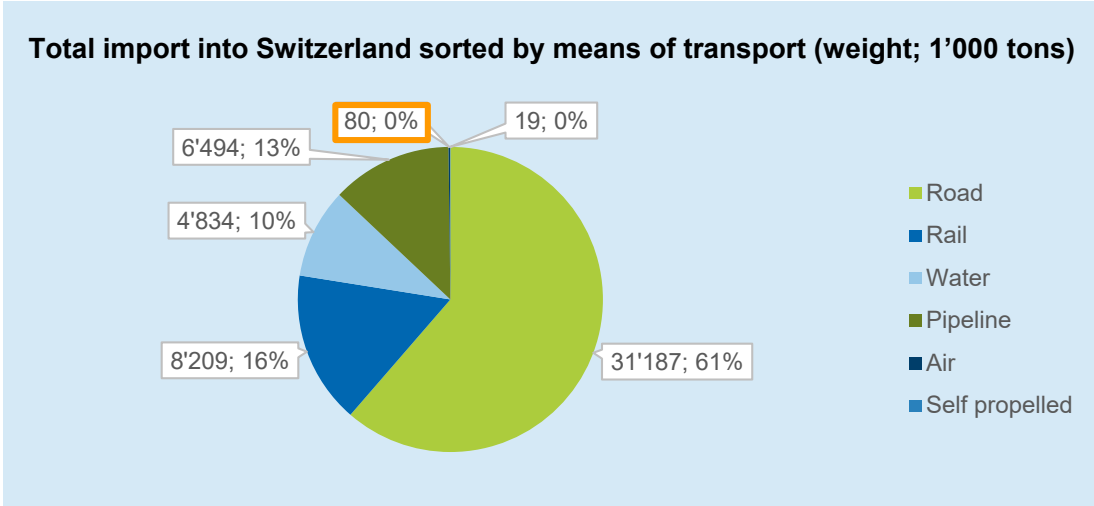


Statistical Airfreight Market Information Regarding the Export – Types of Goods (2019)

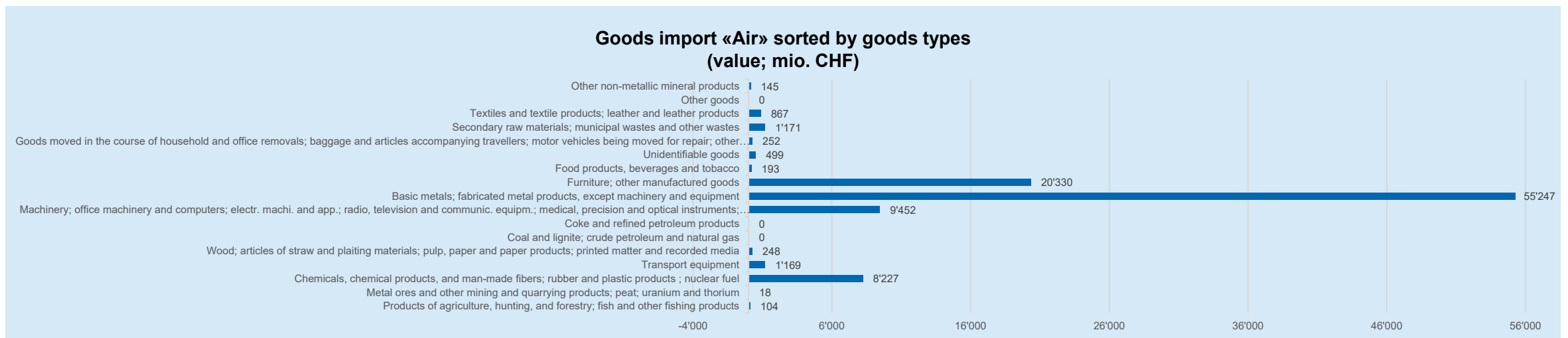
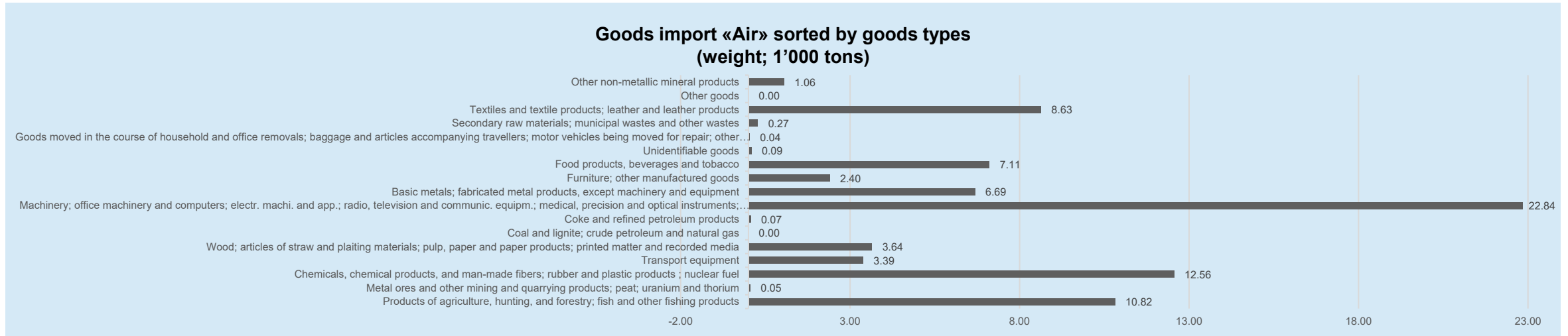


Source: EZV (2020)

Statistical Airfreight Market Information Regarding the Import – Transport Means and Airports (2019)



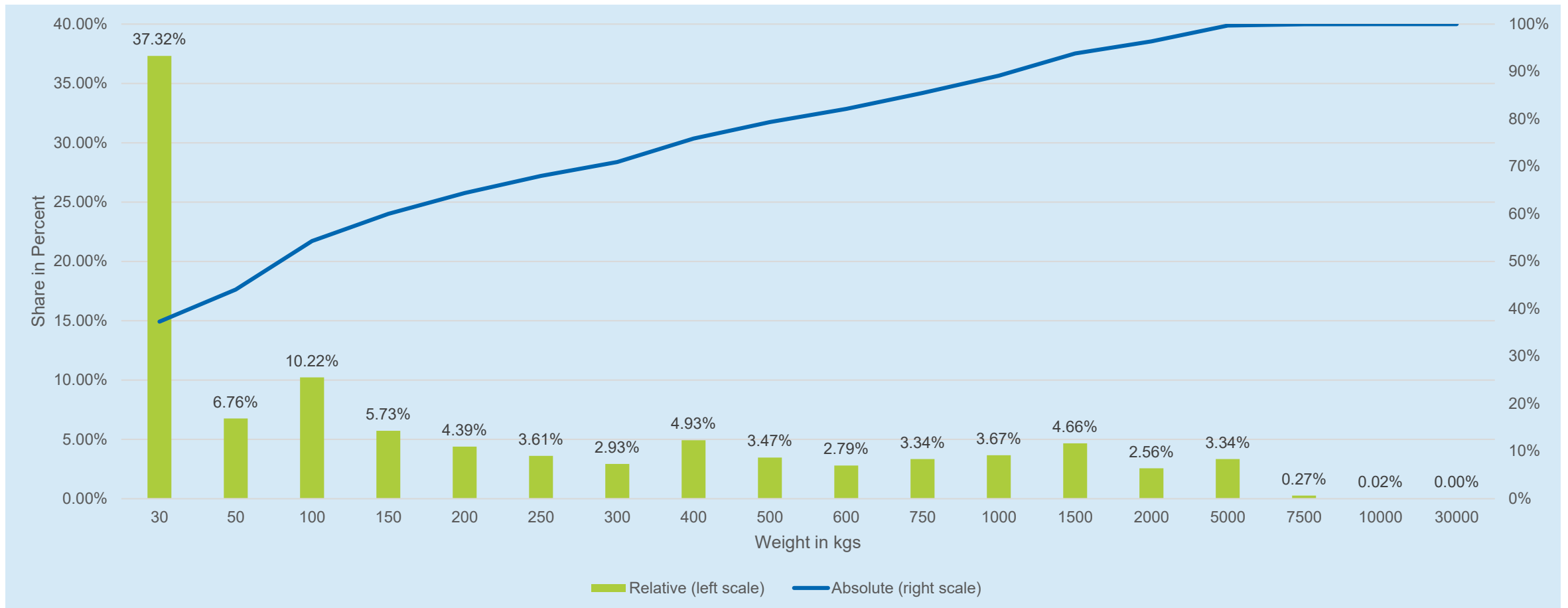
Statistical Airfreight Market Information Regarding the Import – Types of Goods (2019)



Source: EZV (2020)

Consideration of Share of Express vs. Freight and Distribution of Airfreight Consignments (2019)

Distribution of Flown Express and Freight Consignments (0 to 30'000 kgs)



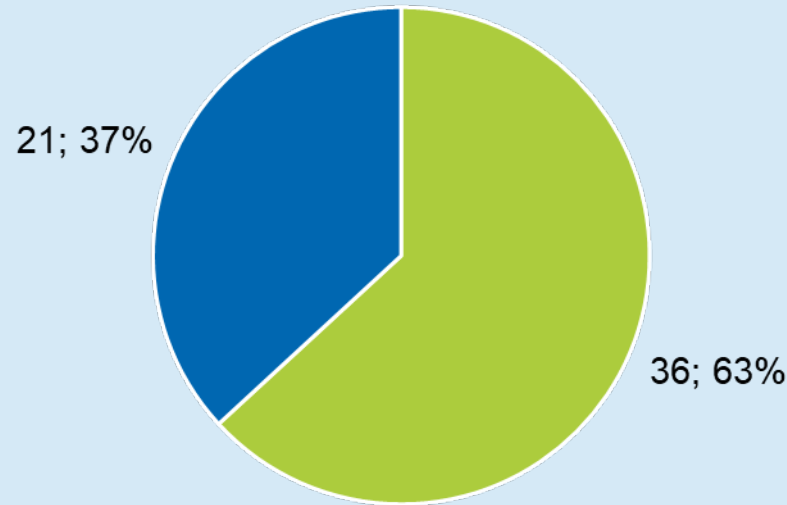
Source: Data Delivered by the Interviewees of the Study of TC-Optimization (2020)

Agenda

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Descriptive Statistics about the Interviews, Data Delivery and Explanatory Power of Independent Variables (Weight resp. Volume)

Feedback rate



■ Further requested shippers ■ Conducted interviews

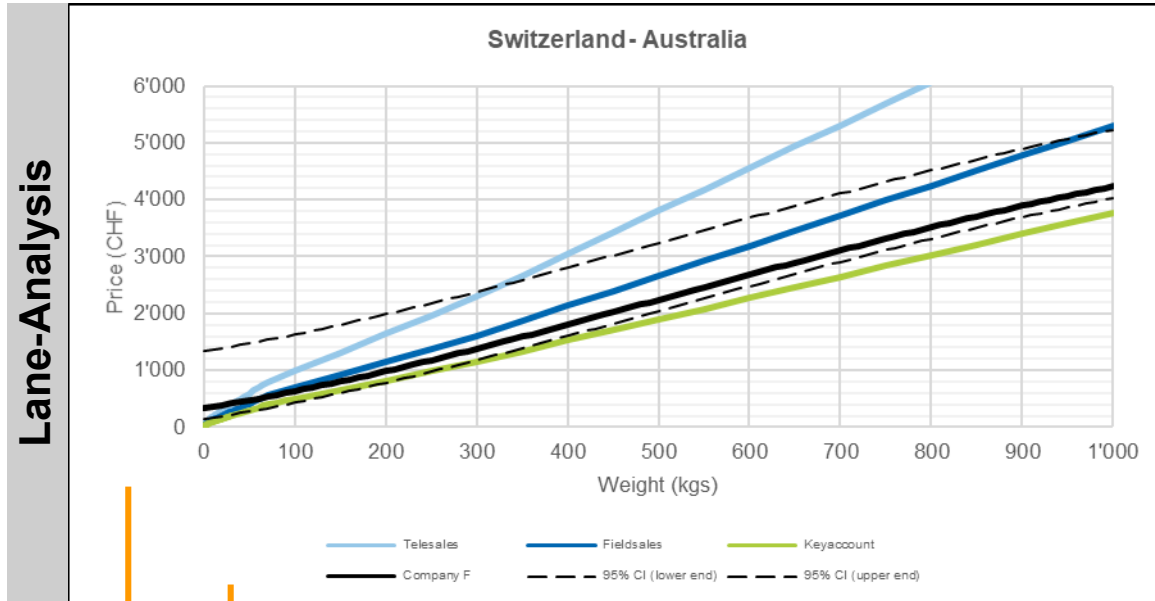
20 out of 21
Data sets (quantitative) delivered

0.978
Explanatory power of weight
(coefficient of determination)

0.143
Explanatory power of volume
(coefficient of determination)

Source: Data Delivered by the Interviewees of the Study of TC-Optimization (2020)

Overview and Explanation of the Lane-based Evaluation (1/2) – Cutting Weight-Analysis and Further Lane-based Insights (2019)



Lane-Analysis

Legend of the graph incl. DHL-related price curves (Telesales, Fieldsales and Keyaccount), trend line and confidence intervals of the lane-based data set

Graph of lane-analysis cutting weight analysis (from the interviewees received quantitative data)

Survey Insights

4 (4)

Answer frequency (rank)

FCA, CPT, DAP

Incoterms (most) used

Run time (average)

n.d. days

(Express)

3-5 days

(Freight)

- Further lane-related insights
 - Difficulties with express consignments can occur and reduce the reliability
 - freight is specialized and therefore more reliable
 - Express has the advantage of the standardized electronic interface incl. documents and track / trace which freight does often not provide
 - No cutting weights for keyaccount-line: express is more cost-competitive

Further lane-based notable insights

Door-to-door-run time (average) in days regarding express and freight consignments [estimated by the interviewees]

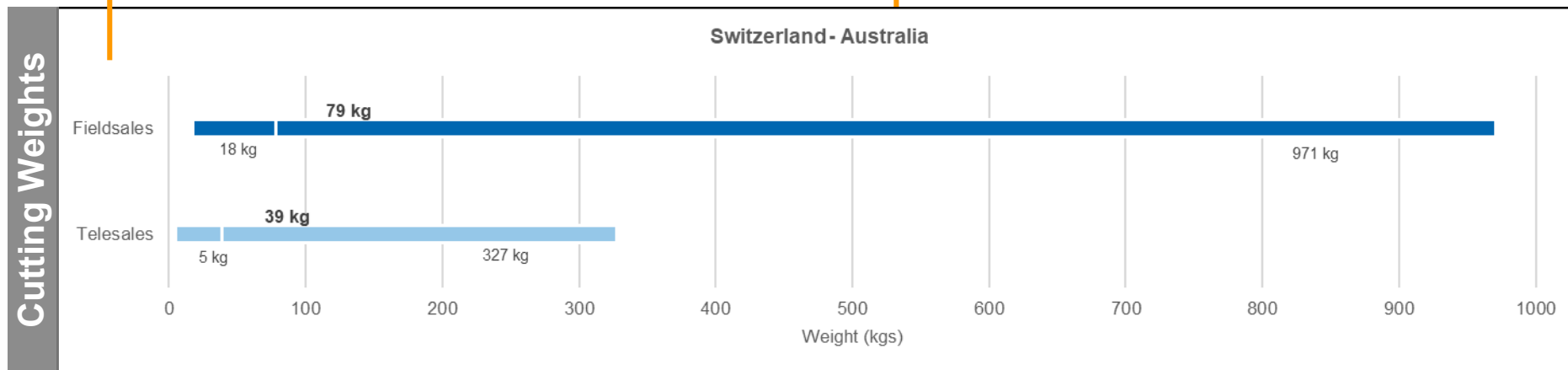
Incoterm used by the shippers interviewed. The most used Incoterm is underlined

Answer frequency (qualitative data) of this specific lane (rank of frequency compared with the whole interview-basis)

Overview and Explanation of the Lane-based Evaluation (2/2) – Cutting Weight-Analysis and Average Cutting Weight (2019)

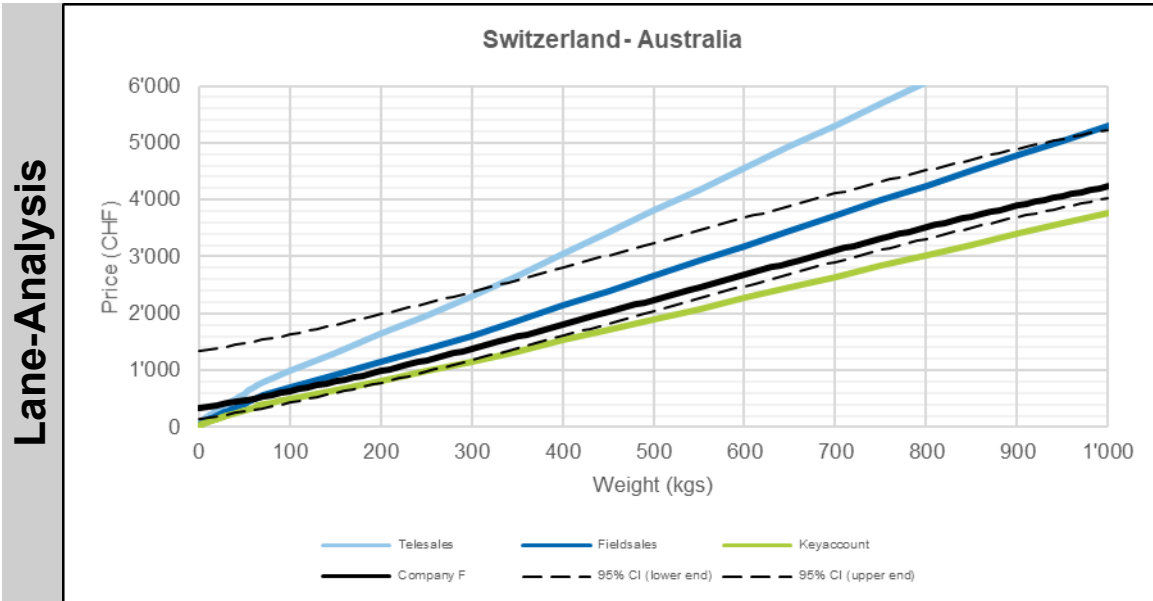
Graph of the cutting weight spectres (kgs)

Average cutting weight (kgs) measured at the cutting weight (trend line)



59 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Australia (2019)

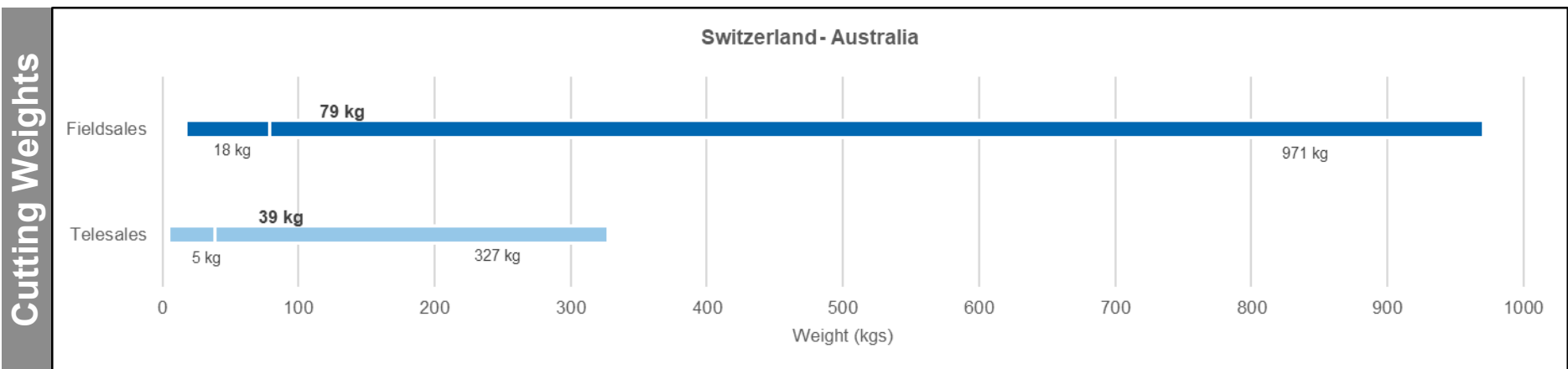


Survey Insights

4 (4) Answer frequency (rank)	FCA, CPT, DAP Incoterms (most) used
n.d. days (Express)	3-5 days (Freight)

Run time (average)

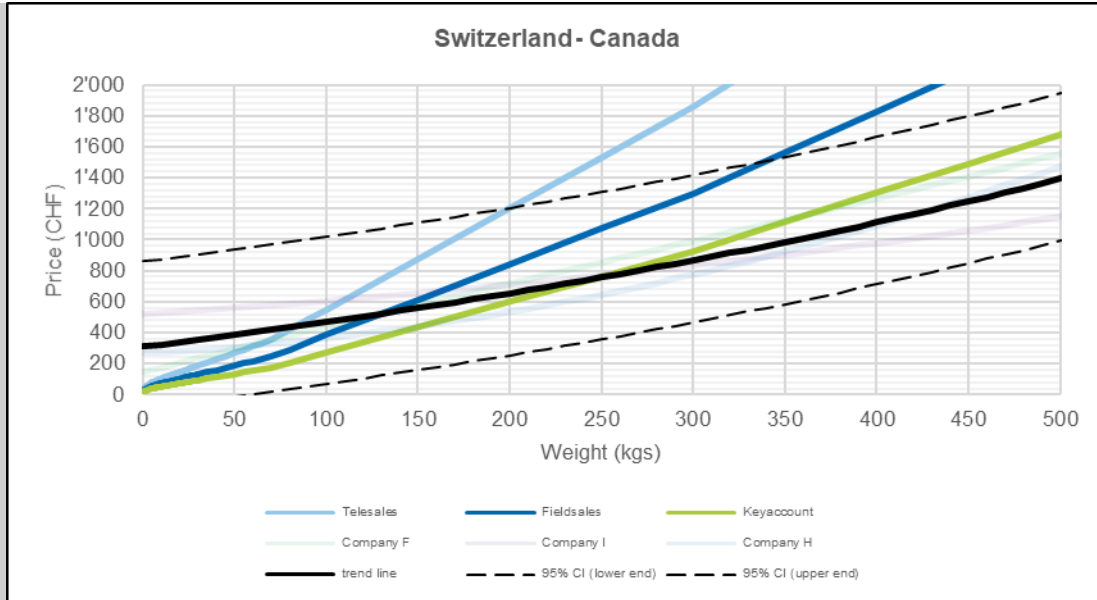
- Further lane-related insights
 - Difficulties with express consignments can occur and reduce the reliability
 - freight is specialized and therefore more reliable
 - Express has the advantage of the standardized electronic interface incl. documents and track / trace which freight does often not provide
 - No cutting weights for keyaccount-line: express is more cost-competitive



59 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland – Canada (2019)

Lane-Analysis



Survey Insights

4 (4)
Answer frequency (rank)

FCA, CPT, DAP, DDP
Incoterms (most) used

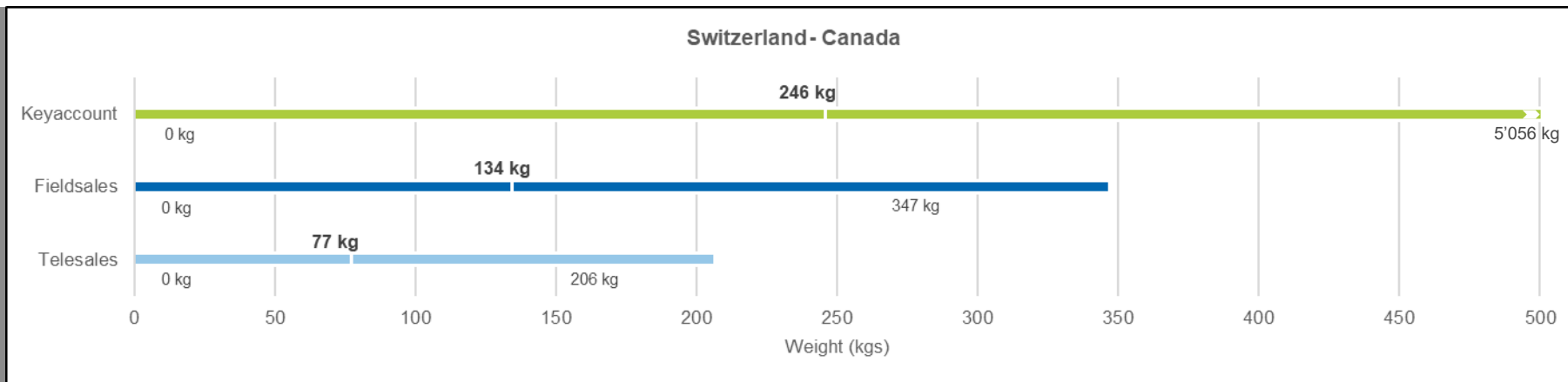
Run time (average)

2-3 days
(Express)

3-5 days
(Freight)

- Further lane-related insights
 - Difficulties with express consignments can occur and reduce the reliability
 - freight is specialized and therefore in some cases more reliable
 - Express has the advantage of the standardized electronic interface incl. documents and track / trace which freight does often not provide

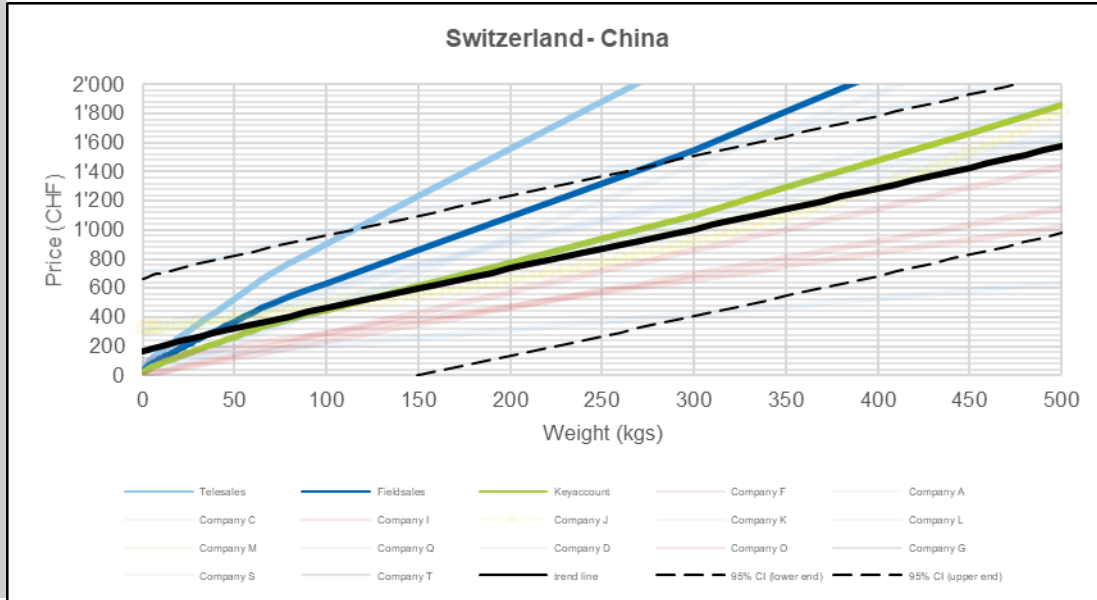
Cutting Weights



153 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - China (2019)

Lane-Analysis



Survey Insights

14 (2)
Answer frequency (rank)

EXW, FOB, FCA, CPT, DAP, DDP
Incoterms (most) used

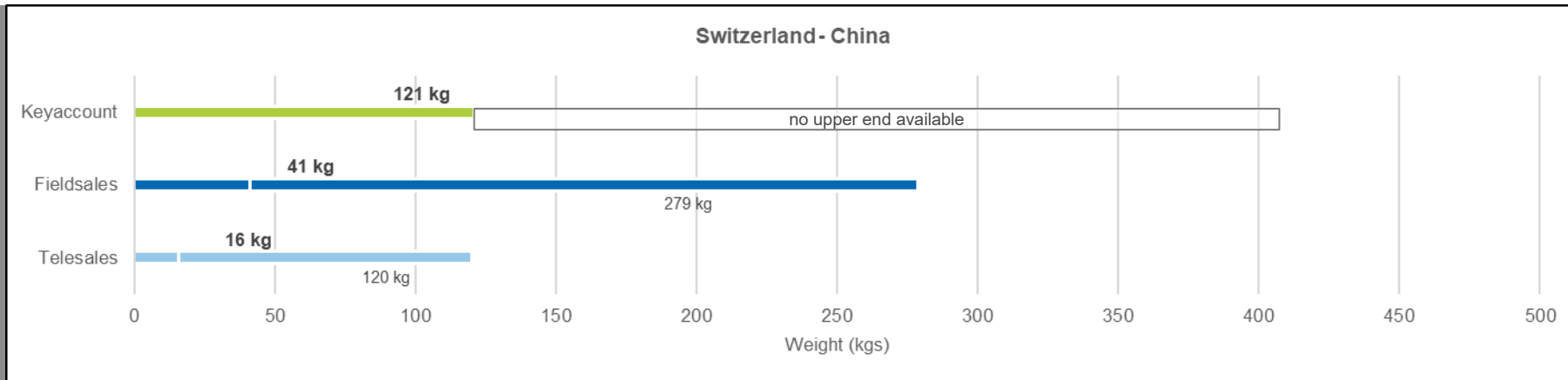
Run time (average)

2-5 days (Express)

4-8 days (Freight)

- Further lane-related insights
 - Outliers can occur with express consignments (e.g. special goods like leather) and reduce the reliability – freight is specialized and therefore in some cases more reliable
 - China can have complex hinterland transports and thus has a high range in rates

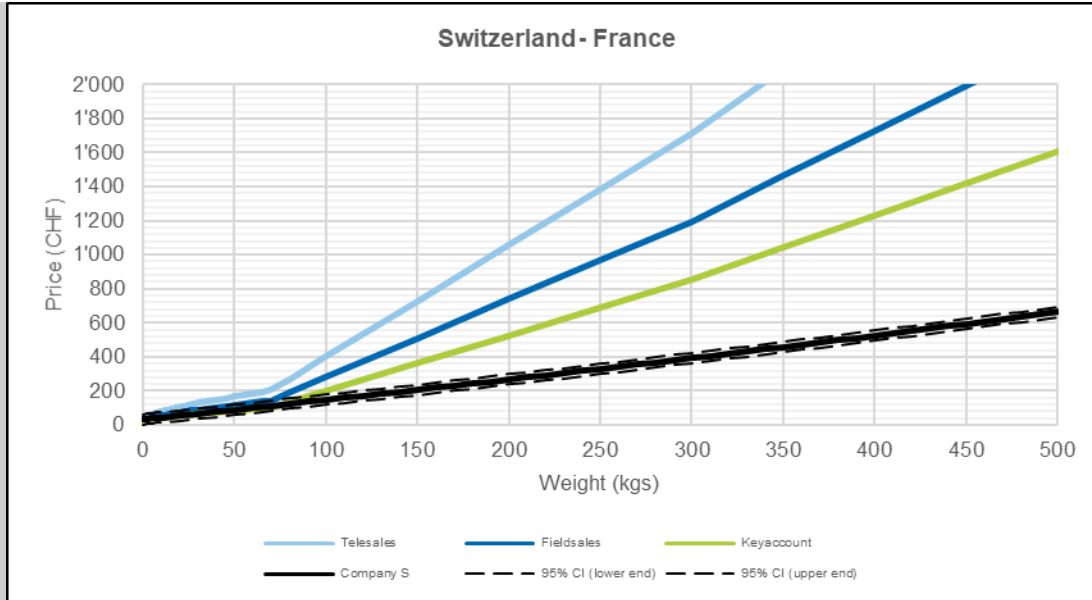
Cutting Weights



59 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - France (2019)

Lane-Analysis



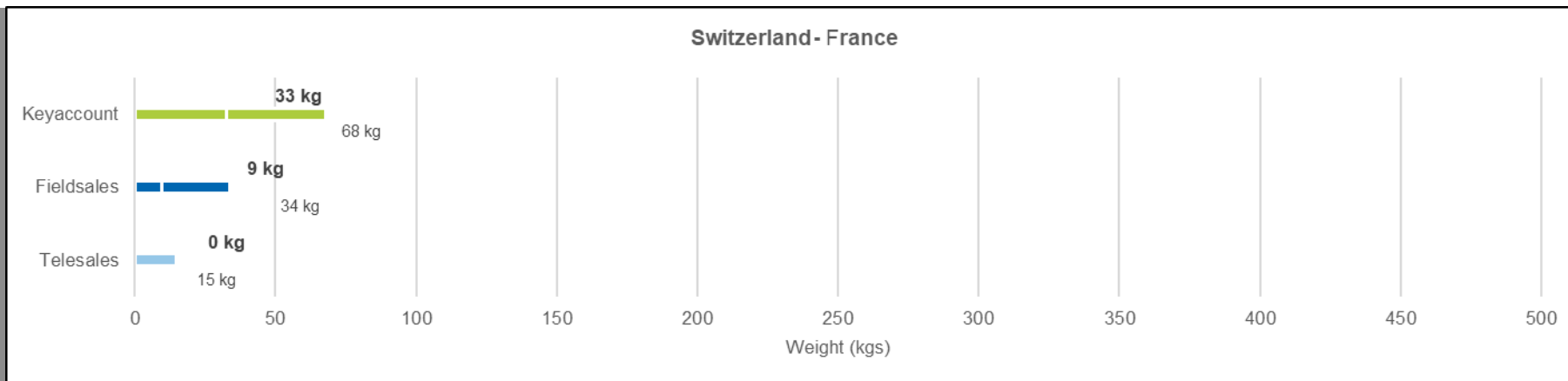
Survey Insights

5 (3) Answer frequency (rank)	EXW, FCA, FOB, CPT, DDP Incoterms (most) used
1-3 days (Express)	1-3 days (Freight)

Run time (average)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and very cost-competitive rates. It seems to be attractive to transport via the road, which is under a high cost pressure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - France”

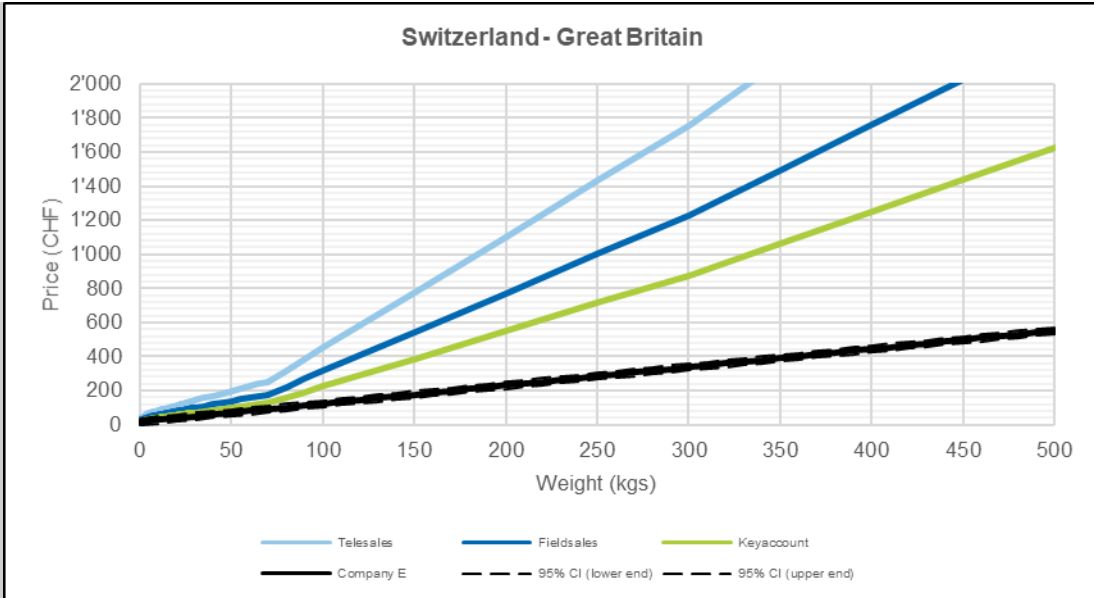
Cutting Weights



14 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Great Britain (2019)

Lane-Analysis



Survey Insights

2 (6)

Answer frequency (rank)

EXW, FOB, CPT, CIF, DDP

Incoterms (most) used

Run time (average)

1-2 days

(Express)

2-3 days

(Freight)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and very cost-competitive rates. It seems to be attractive to transport via the road, which is under a high cost pressure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Great Britain”

Cutting Weights

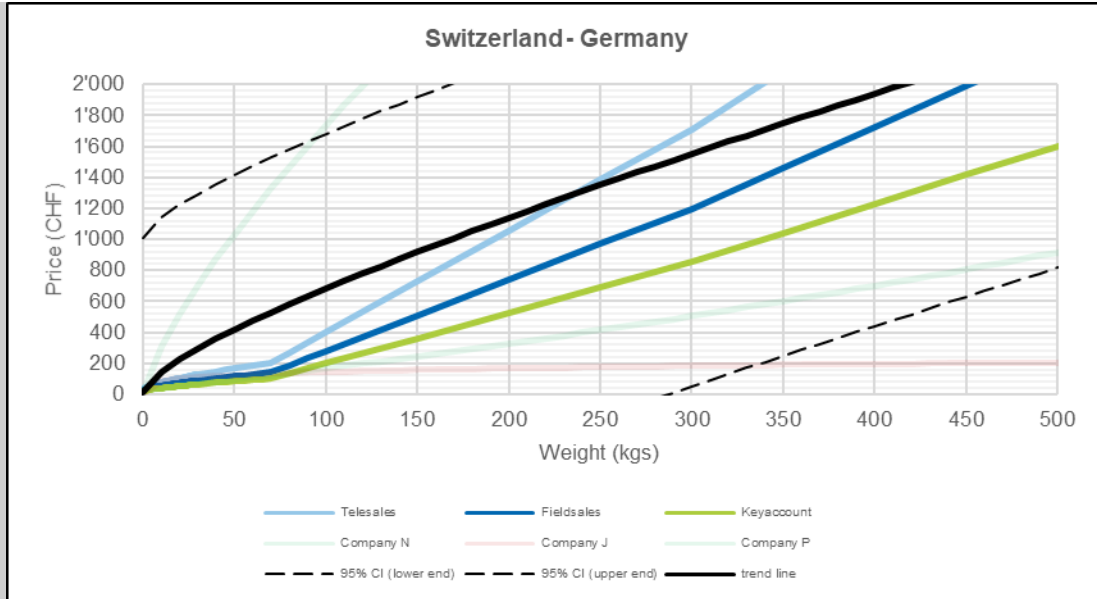
Since the express-rates are higher than the interview-gathered rates in the majority of cases, any cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Germany (2019) [1/2]

Lane-Analysis



Survey Insights

5 (3)

Answer frequency (rank)

EXW, DAP, DDP

Incoterms (most) used

Run time (average)

1-2 days

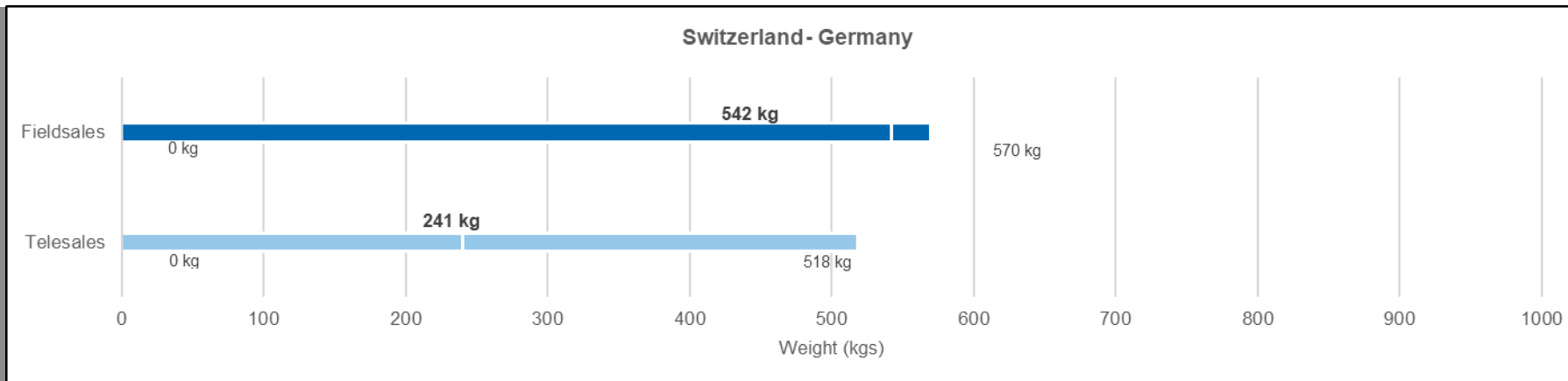
(Express)

2-4 days

(Freight)

- Further lane-related insights
 - An outlier (pharmaceutical company) gets charged high prices compared to other shippers. Therefore, this lane is re-analyzed without the outlier
 - However, in this setup the lane holds a high cutting weight

Cutting Weights

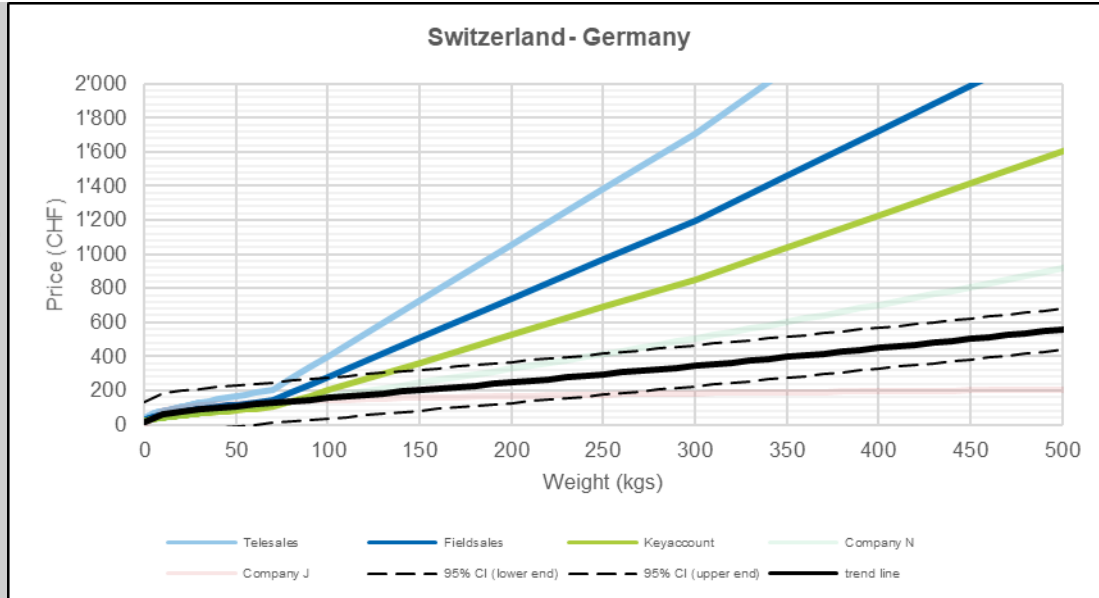


392 kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Germany (2019) [2/2]

Lane-Analysis



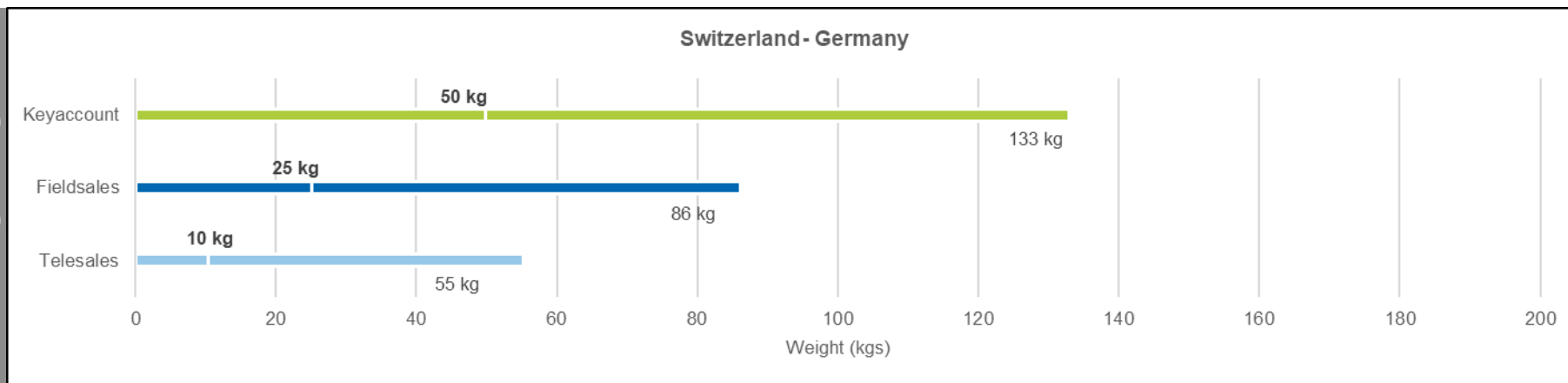
Survey Insights

5 (3) Answer frequency (rank)	EXW, DAP, DDP Incoterms (most) used
1-2 days (Express)	2-4 days (Freight)

Run time (average)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and very cost-competitive rates. It seems to be attractive to transport via the road, which is under a high cost pressure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Germany”

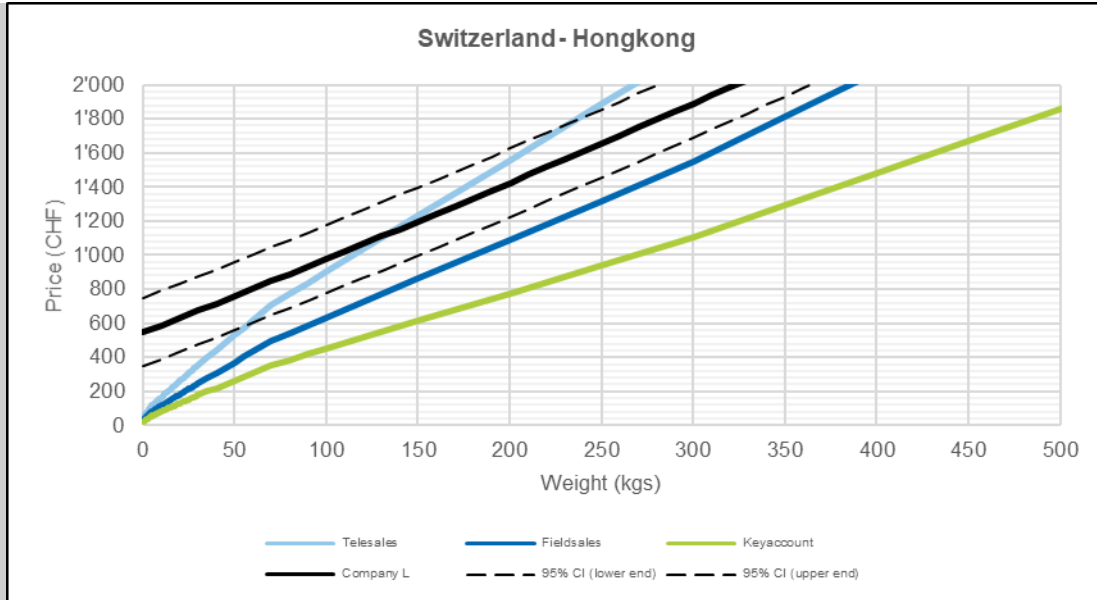
Cutting Weights



28 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Hongkong (2019)

Lane-Analysis



Survey Insights

1 (7)

Answer frequency (rank)

EXW, FCA, FOB

Incoterms (most) used

Run time (average)

2-3 days

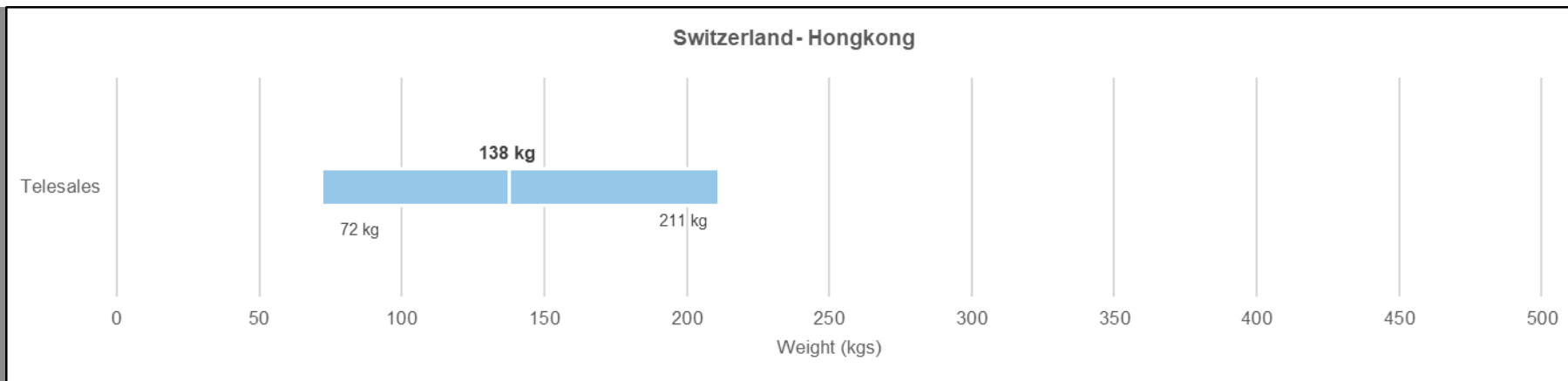
(Express)

3-4 days

(Freight)

- Further lane-related insights
 - No cutting weights for fliesales- and keyaccount-line mean that express is more cost-competitive than freight
 - Due to the strong infrastructure of express compared to freight, the cutting weights are relatively high or inexistent

Cutting Weights

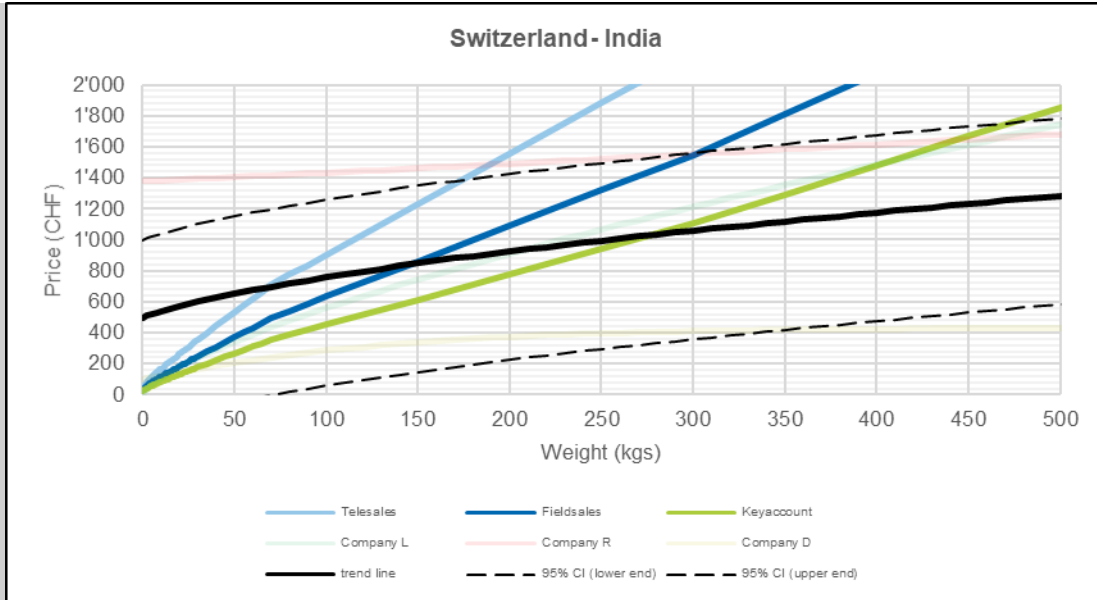


138 kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - India (2019)

Lane-Analysis



Survey Insights

4 (4)

Answer frequency (rank)

EXW, FCA, CIP, FOB, DAP, DDP

Incoterms (most) used

Run time (average)

3-4 days

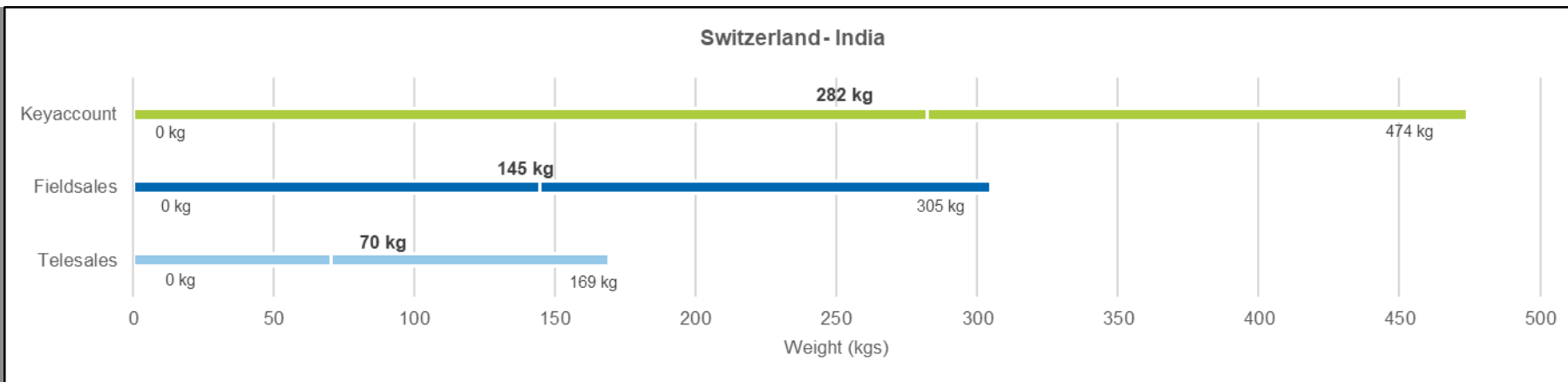
(Express)

4-7 days

(Freight)

- Further lane-related insights
 - The shippers get charged different prices that also cause high variance in cutting weight ranges
 - The high range in rates can also occur due to complex hinterland transports

Cutting Weights

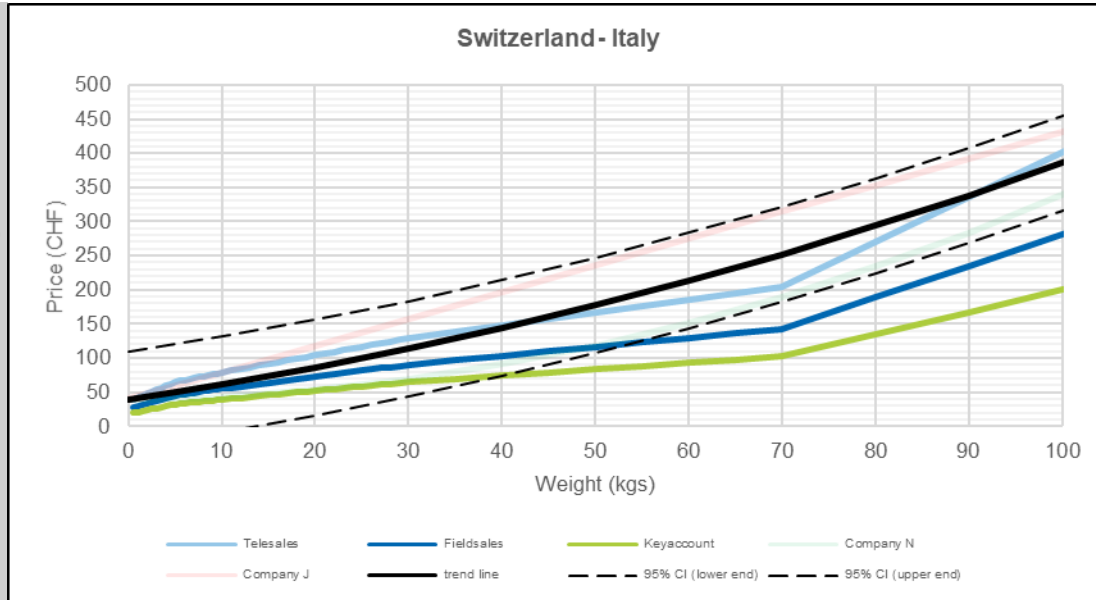


166 kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Italy (2019)

Lane-Analysis



Survey Insights

4 (4)

Answer frequency (rank)

DAP, DDP

Incoterms (most) used

Run time (average)

1-3 days

(Express)

2-4 days

(Freight)

- Further lane-related insights
 - No clear picture could be identified of when the advantages of express transfer to freight

Cutting Weights

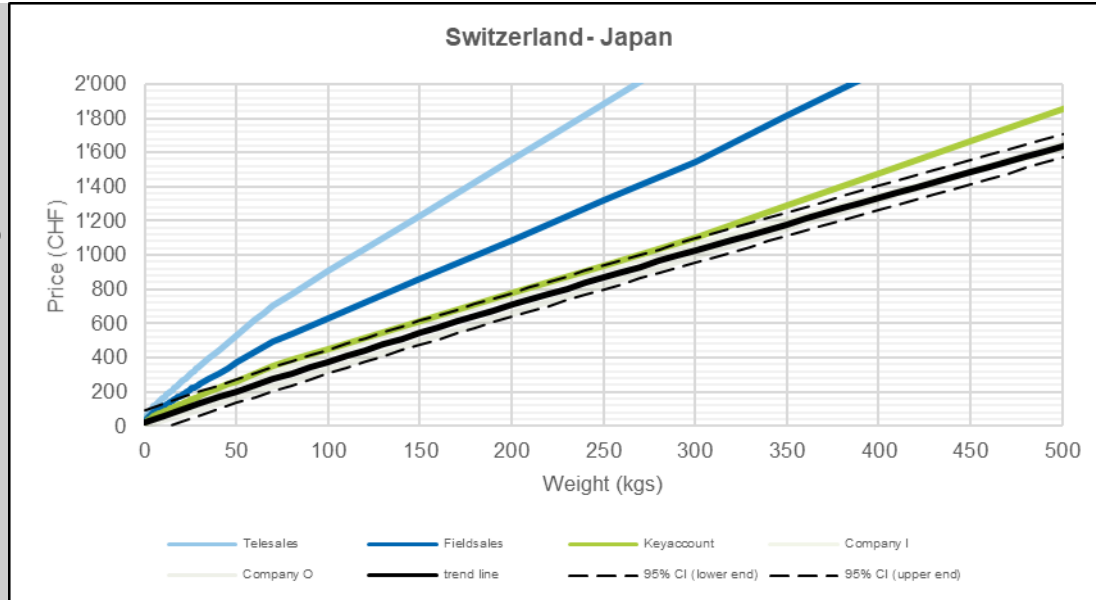
Since the express-rates are higher than the interview-gathered rates in many cases and interview-gathered rates vary, no clear picture of cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Japan (2019)

Lane-Analysis



Survey Insights

2 (6)

Answer frequency (rank)

CPT, DDP

Incoterms (most) used

Run time (average)

3-5 days

(Express)

4-8 days

(Freight)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and cost-competitive rates. It seems like express and especially freight logistics service providers have a strong infrastructure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Japan”

Cutting Weights

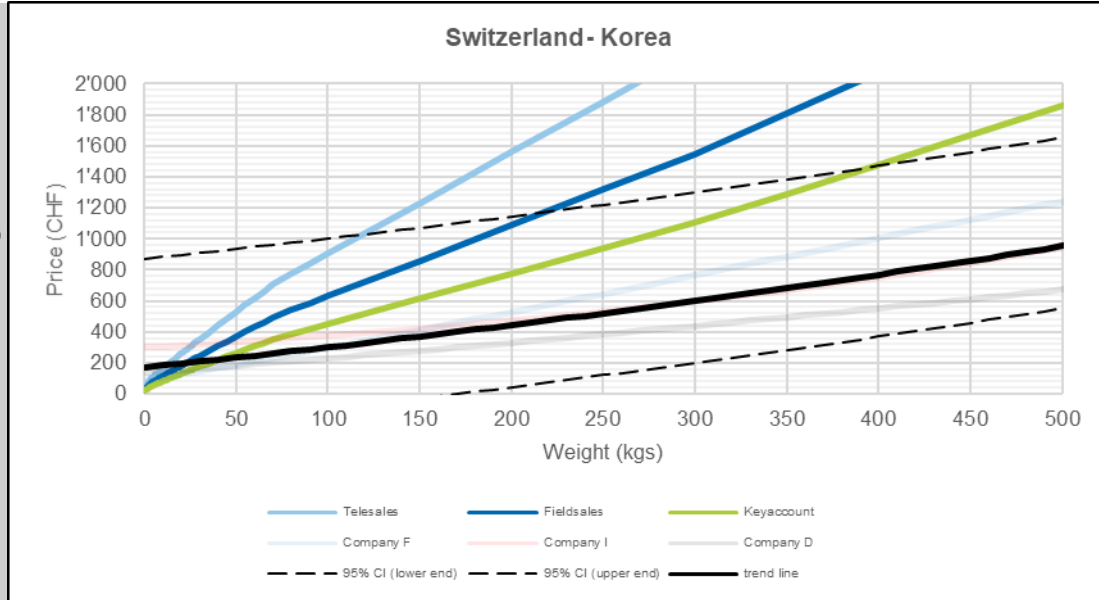
Since the express-rates are higher than the interview-gathered rates in the majority of cases, any cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Korea (2019)

Lane-Analysis



Survey Insights

3 (5)
Answer frequency (rank)

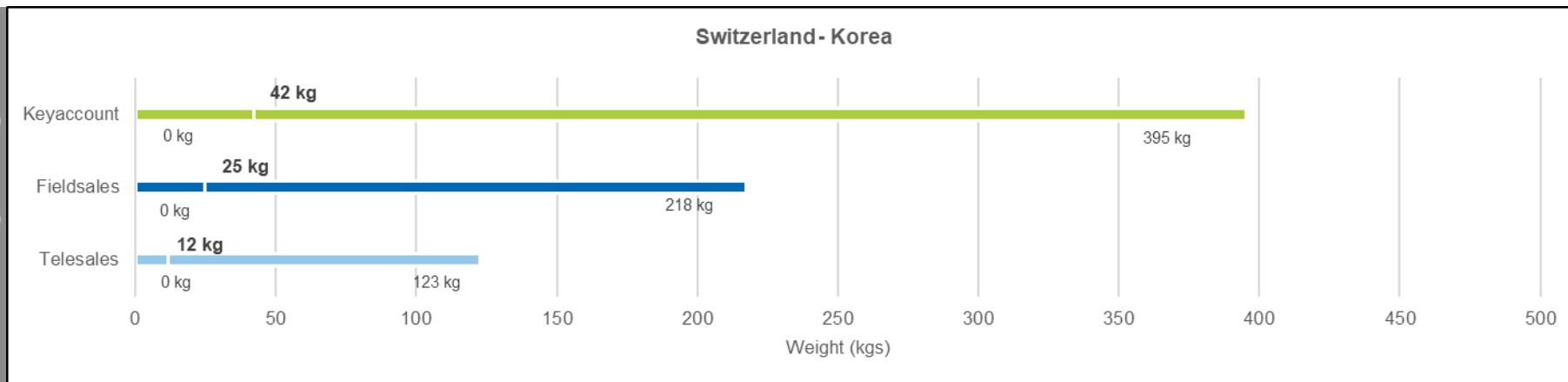
FCA, CPT, CIP, DDP
Incoterms (most) used

3-4 days
(Express)

4-5 days
(Freight)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and cost-competitive rates. It seems like express and especially freight logistics service providers have a strong infrastructure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Korea”

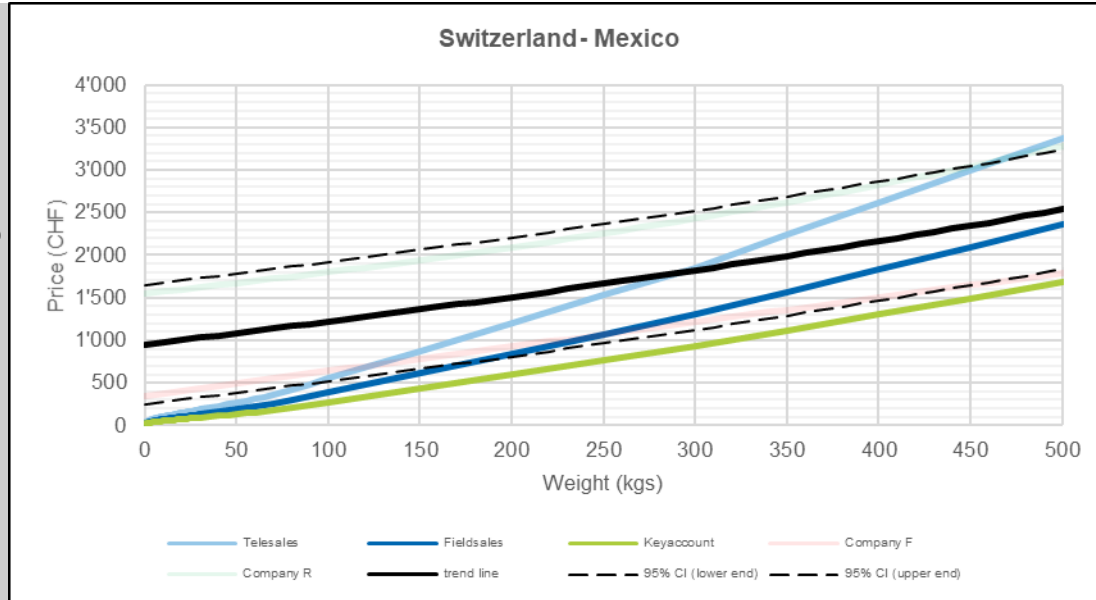
Cutting Weights



26 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Mexico (2019)

Lane-Analysis



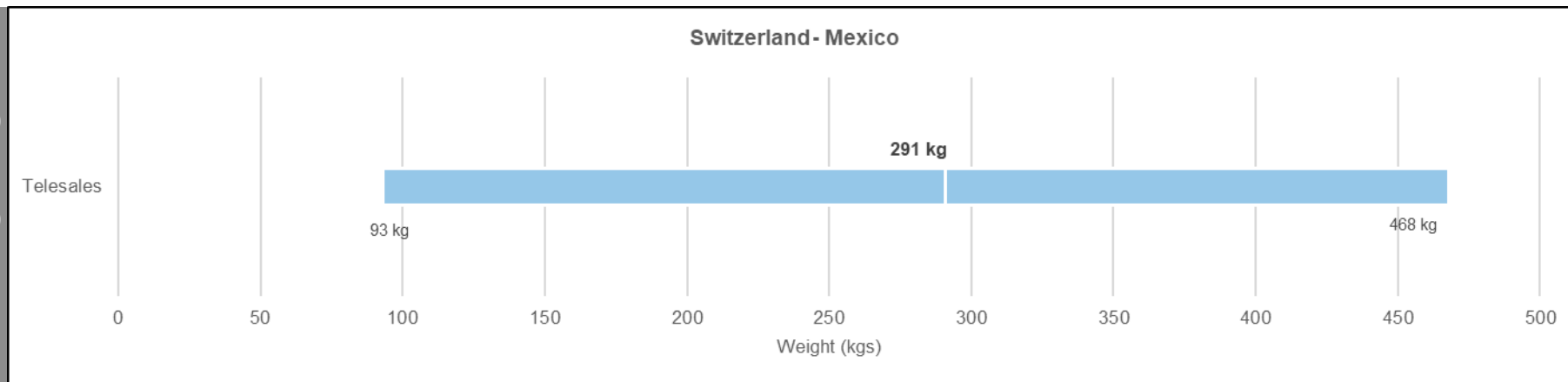
Survey Insights

3 (5) Answer frequency (rank)	FCA, CPT, DAP Incoterms (most) used
3-5 days (Express)	4-7 days (Freight)

Run time (average)

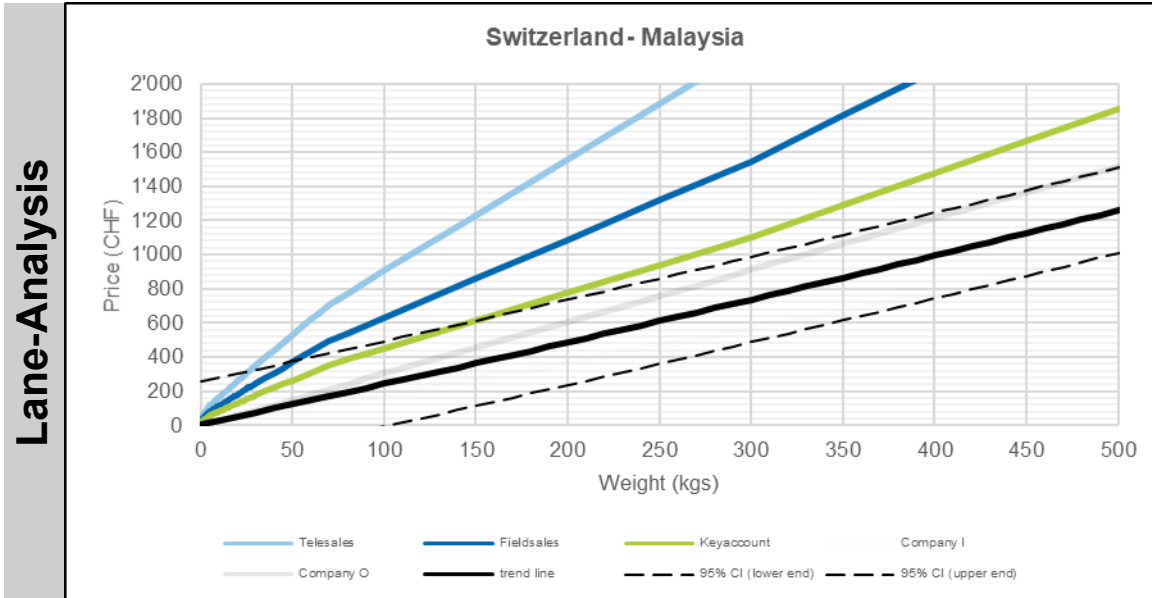
- Further lane-related insights
 - No cutting weights for fieldsales- and keyaccount-line mean that express is more cost-competitive than freight
 - Due to the strong infrastructure of express compared to freight, the cutting weights are relatively high

Cutting Weights



291 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Malaysia (2019)



Survey Insights

2 (6)

Answer frequency (rank)

CPT, DDP

Incoterms (most) used

Run time (average)

3-5 days

(Express)

5-8 days

(Freight)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and cost-competitive rates. It seems like express and especially freight logistics service providers have a strong infrastructure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Malaysia”

Cutting Weights

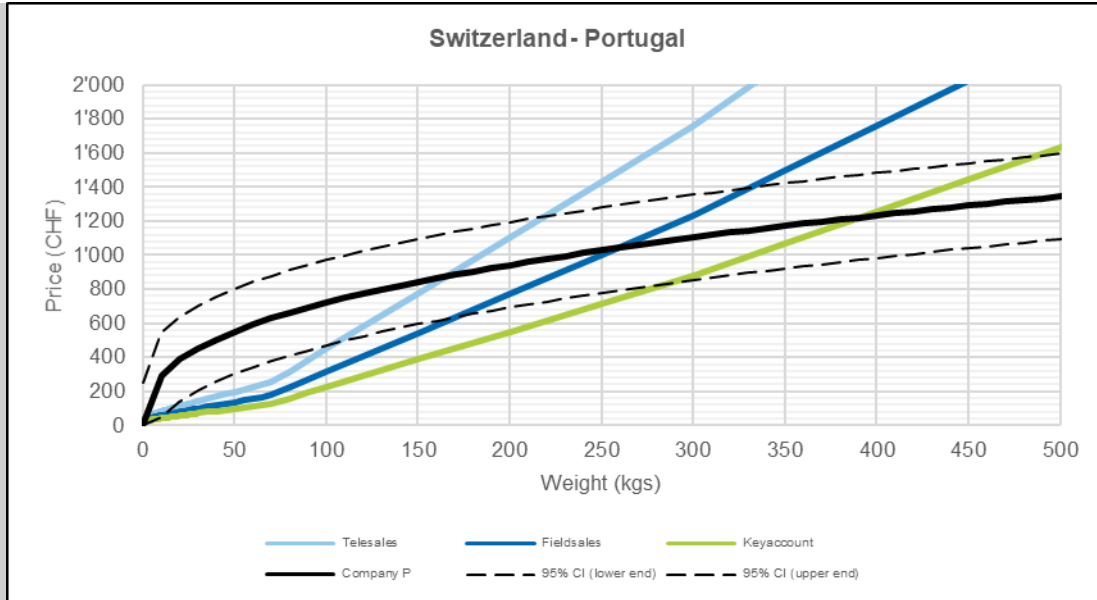
Since the express-rates are higher than the interview-gathered rates in the majority of cases, any cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Portugal (2019)

Lane-Analysis



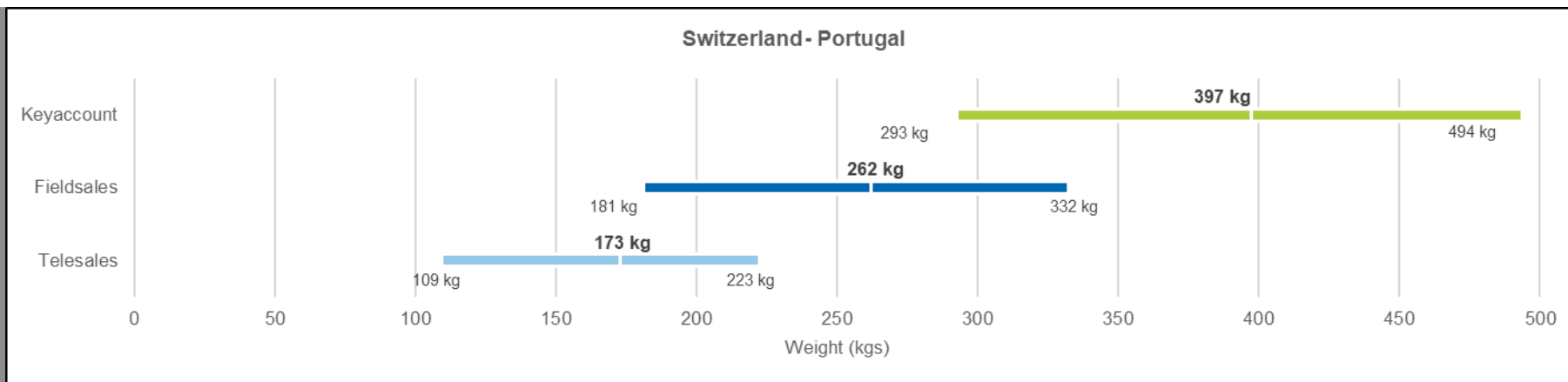
Survey Insights

1 (7) Answer frequency (rank)	DDP Incoterms (most) used
2 days (Express)	2-3 days (Freight)

Run time (average)

- Further lane-related insights
 - Especially in low weights the shippers get charged relatively high rates, where express has an advantage
 - Due to the strong infrastructure of express compared to freight, the cutting weights are relatively high

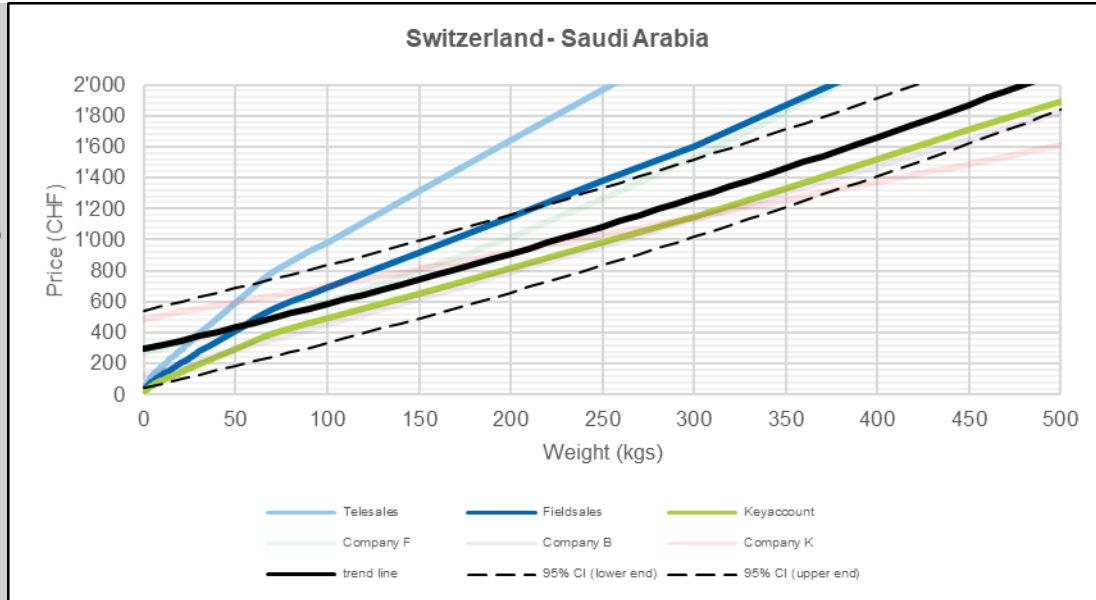
Cutting Weights



277 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Saudi Arabia (2019)

Lane-Analysis



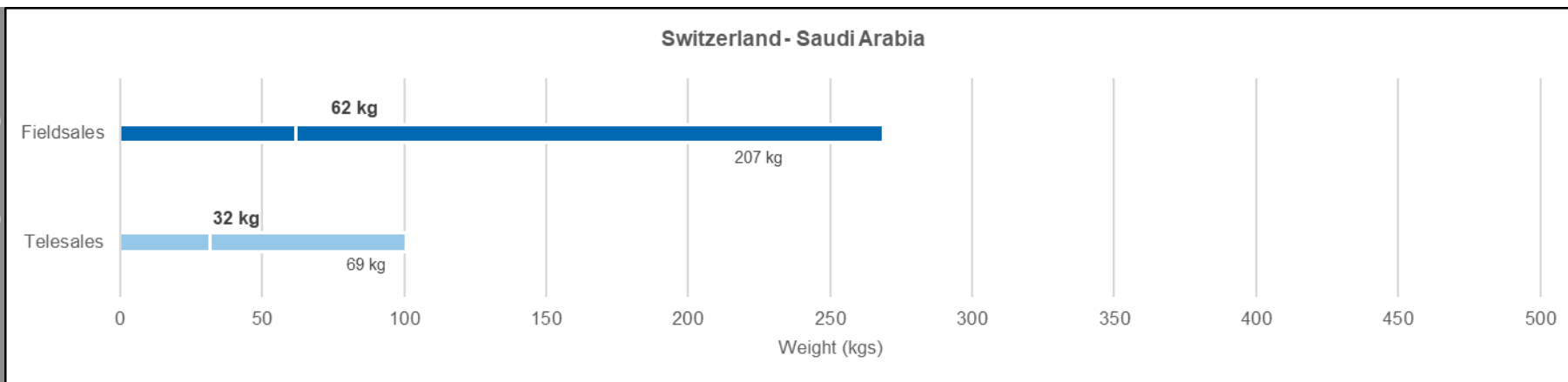
Survey Insights

3 (5) Answer frequency (rank)	DAP Incoterms (most) used
3-4 days (Express)	5-7 days (Freight)

Run time (average)

- Further lane-related insights
 - No cutting weights for keyaccount-line indicates that express is more cost-competitive, even at a parity of reliability and shorter run time

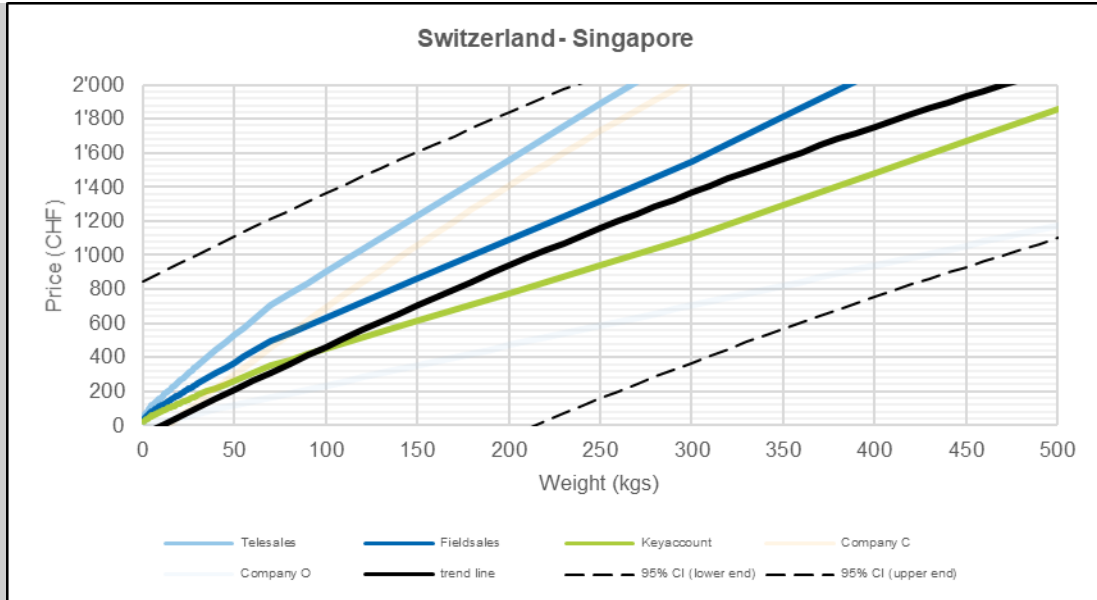
Cutting Weights



47 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Singapore (2019)

Lane-Analysis



Survey Insights

2 (6)

Answer frequency (rank)

FCA, CPT, DAP, DDP

Incoterms (most) used

Run time (average)

3-5 days

(Express)

4-6 days

(Freight)

- Further lane-related insights
 - No clear picture could be identified of when the advantages of express transfer to freight

Cutting Weights

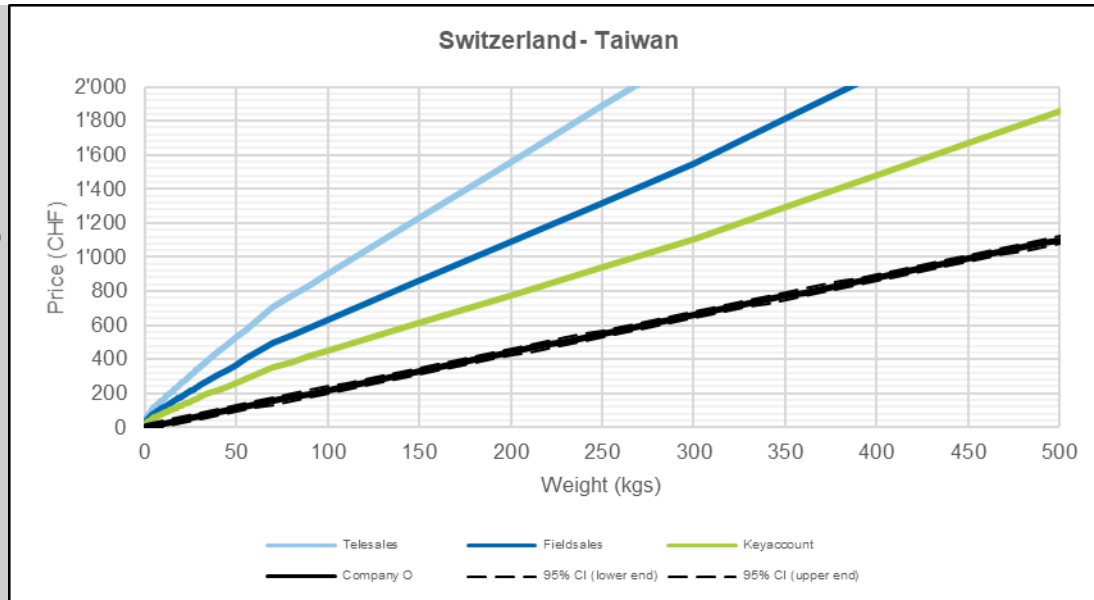
Since the express-rates do rise with the interview-gathered rates, no clear cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - Taiwan (2019)

Lane-Analysis



Survey Insights

3 (5)
Answer frequency (rank)

FCA, CIP, CPT, DDP
Incoterms (most) used

3-4 days
(Express)

4-5 days
(Freight)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have attractive and cost-competitive rates. It seems like express and especially freight logistics service providers have a strong infrastructure
 - Since the cutting weights are relatively low, this study cannot identify a relevant new market potential for the lane “Switzerland - Taiwan”

Cutting Weights

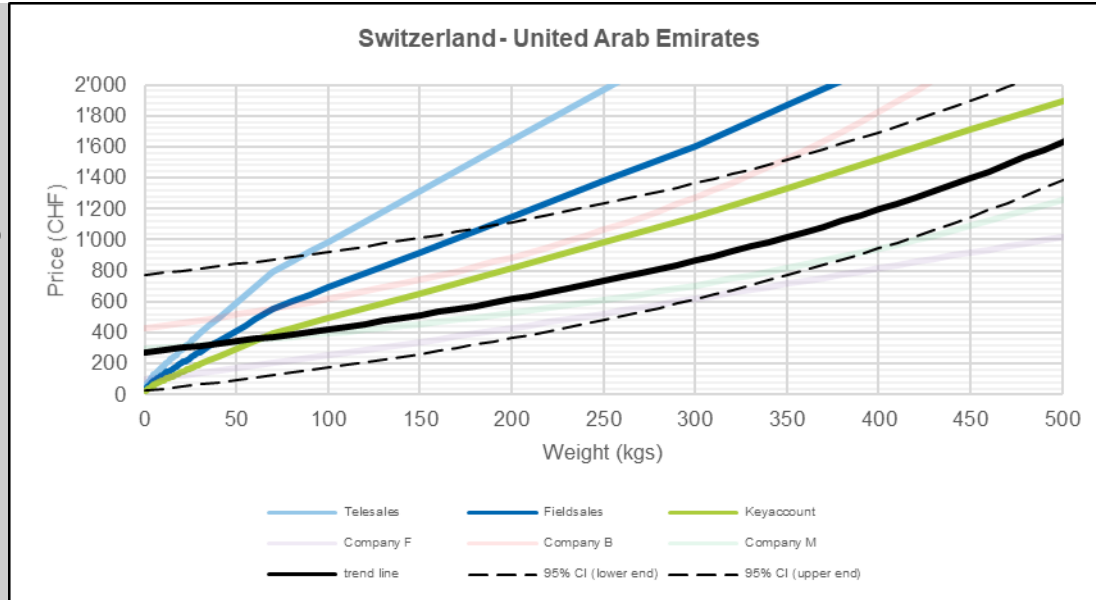
Since the express-rates are higher than the interview-gathered rates in the majority of cases, any cutting weights can be calculated.

n.a. kgs

Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - United Arab Emirates (2019)

Lane-Analysis



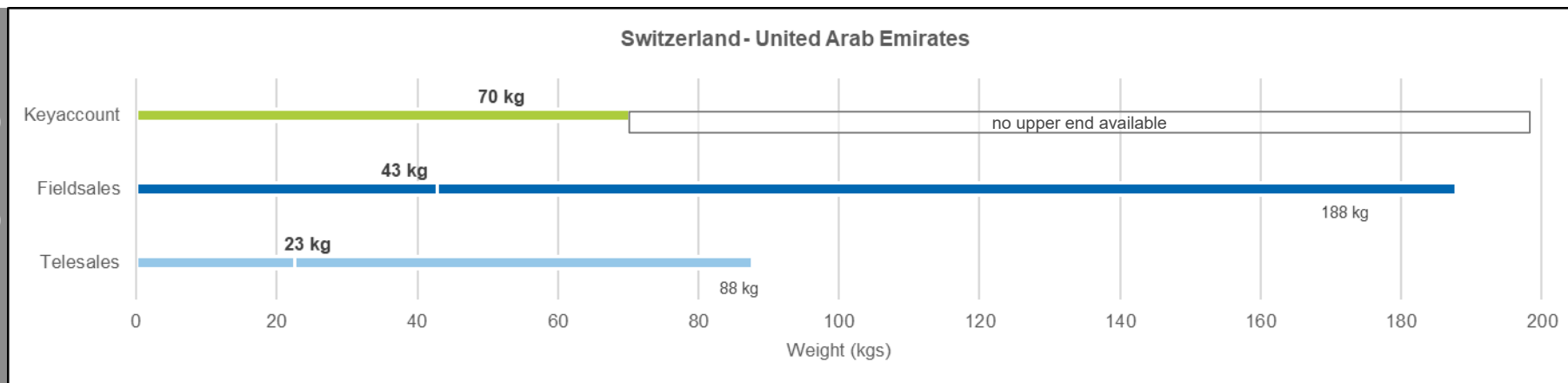
Survey Insights

3 (5) Answer frequency (rank)	CPT, DAP Incoterms (<u>most</u>) used
3-4 days (Express)	5-7 days (Freight)

Run time (average)

- Further lane-related insights
 - The interview-gathered data shows that the interviews have fairly attractive and cost-competitive rates
 - Express has the advantage of the standardized electronic interface incl. documents and track / trace which freight does often not provide

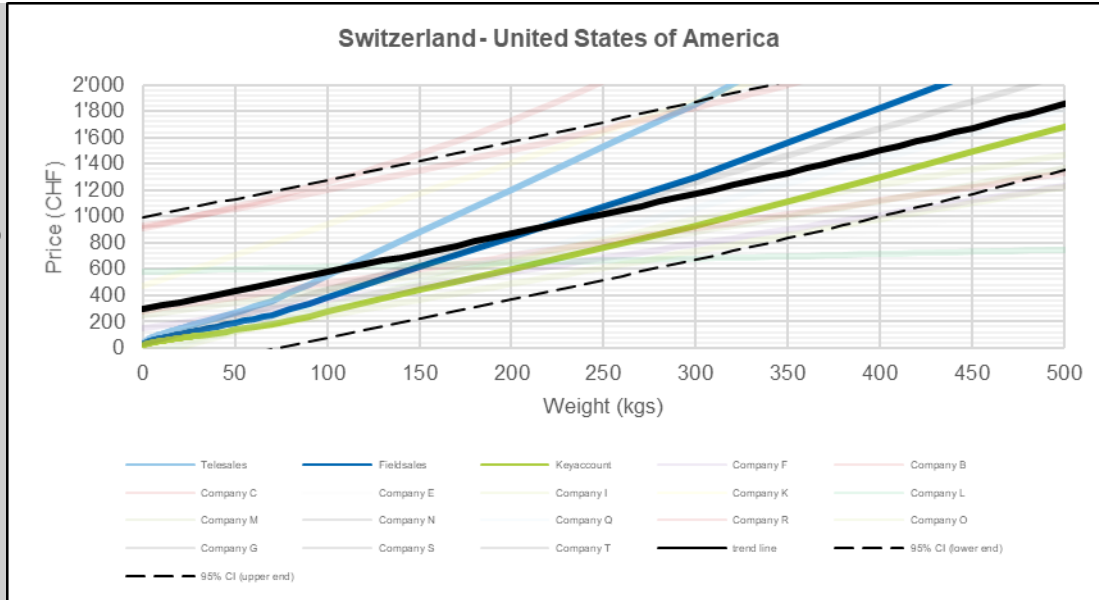
Cutting Weights



45 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - United States of America (2019) [1/2]

Lane-Analysis



Survey Insights

15 (1)
Answer frequency (rank)

EXW, FOB, FCA, CPT, DAP, DDP
Incoterms (most) used

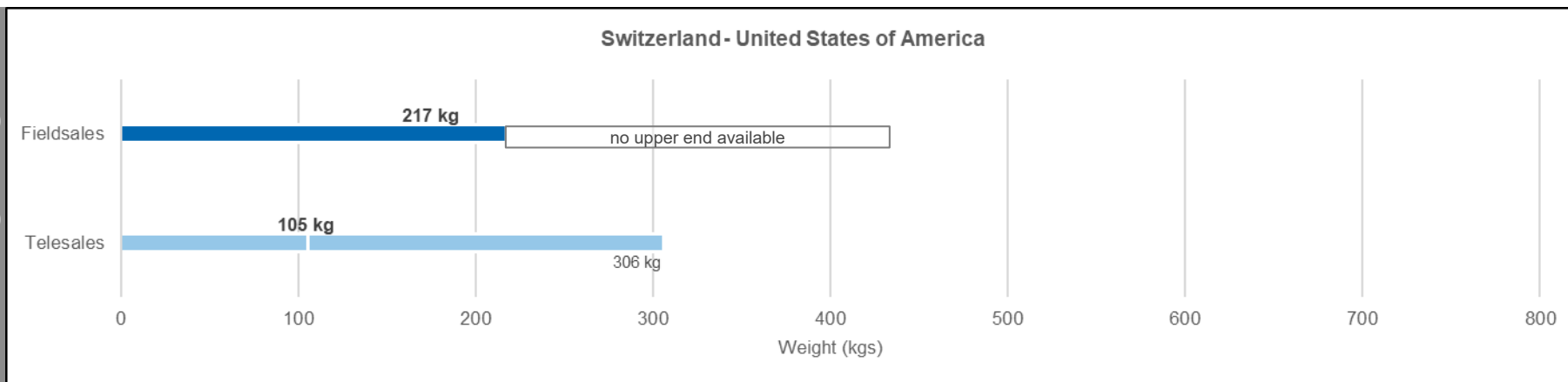
Run time (average)

3-4 days
(Express)

4-7 days
(Freight)

- Further lane-related insights
 - Dangerous and special goods like chemicals resp. leathers take more time at customs clearance
 - Three outliers gets charged relatively high prices compared to other shippers. Therefore, this lane is re-analyzed without the outlier

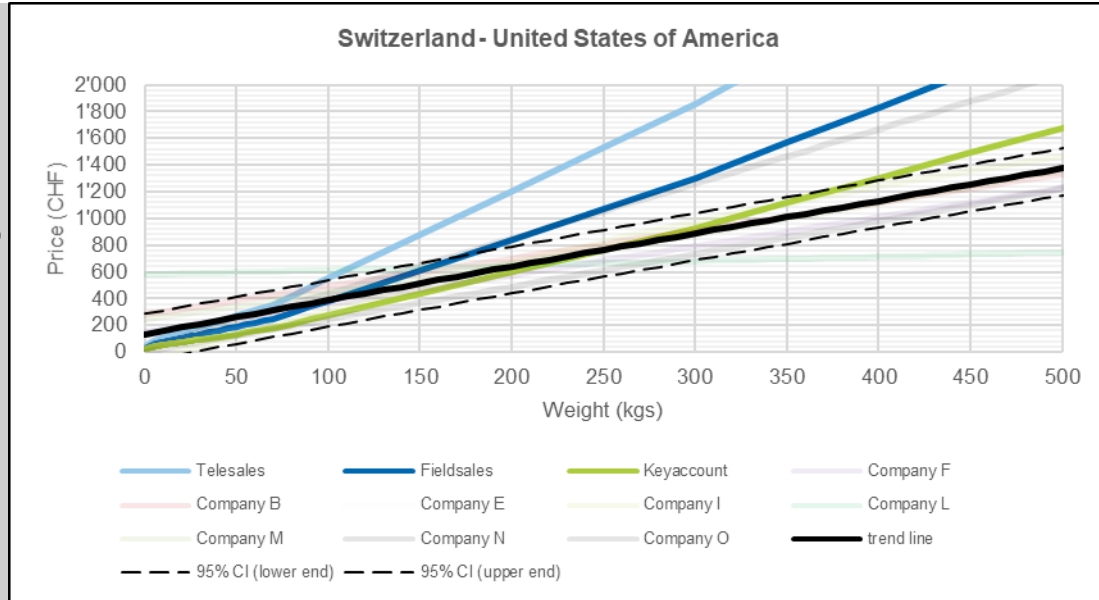
Cutting Weights



161 kgs
Average cutting weight

Cutting Weight-Analysis and Further Lane-based Statements – Lane Switzerland - United States of America (2019) [2/2]

Lane-Analysis



Survey Insights

15 (1)
Answer frequency (rank)

EXW, FOB, FCA, CPT, DAP, DDP
Incoterms (most) used

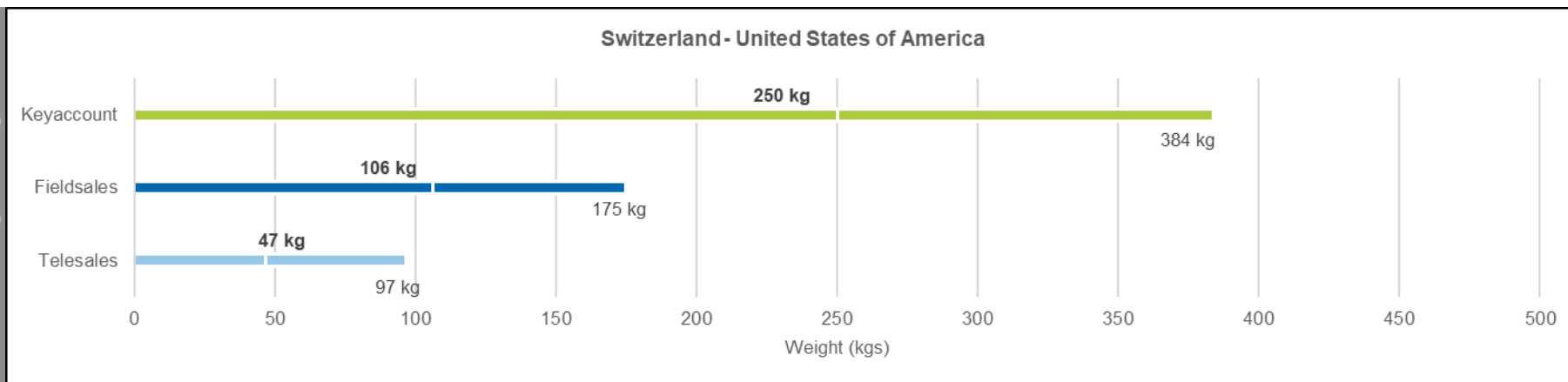
3-4 days
(Express)

Run time (average)

4-7 days
(Freight)

- Further lane-related insights
 - Dangerous and special goods like chemicals resp. leathers take more time at customs clearance
 - Due to the strong infrastructure of express compared to freight, the cutting weights are relatively high

Cutting Weights



134 kgs
Average cutting weight

Agenda

1. Challenges and Requirements of Total Cost-Optimization in International Airfreight
2. Methodology of the Total Cost-Optimization
3. Statistical Parameters on the Airfreight Market
4. Lane-based Evaluation

5. Further Evaluations

6. Summary, Limitations and Outlook

Trade-offs Between Express and Freight – How Standards, Control, Coordination and Speed Affects the Trade-off

Through what Aspects Shippers are Choosing Express or Freight (1/2)

- Standards: Due to the electronic interface, express holds an advantage in standardized document management and track / trace, but can lack an individualized customs clearance and therefore lose time in customs processing
- Control: Freight is more steerable, what is especially important for highly engineered products that involve a complex and tight project management, but the freights' many sub-contractors can lead to delays
- Flexibility: Freight (especially) is more expensive at higher weights, but holds an advantage in reliability and flexibility (especially when considering large multinational express logistics service provider)
- Coordination: Freight at times is slower than it could be because the customer needs to prepare documents / needs to communicate, but is not used to the processes
- Speed: Express often goes directly to the customer (faster), whereas freight is chosen to transport to the regional distribution center (at times also via several airports to save money, but not for fragile or high value goods such as sensors, pharmaceuticals and medical technology)
- Speed: Express does the customs preparation during the fore-run, whereas freight prepares the documents later (takes more time)

Trade-offs Between Express and Freight – How Issues, Capacities, Customs Clearance and Expertise Affects the Trade-off

Through what Aspects Shippers are Choosing Express or Freight (2/2)

- Customs issues: Even though express picks up consignments on a daily basis, problems occur at when executing customs clearance. Therefore larger volumes are not really feasible for shipping with an express logistics service provider
- Transport capacities: When choosing freight a consignment can miss a flight-slot. Considering flight-slots express logistics service provider have better management and control over their assets
- Documentation: Freight has the difficulty, that documents can go missing, whereas express has digital documents that are ubiquote
- Complex customs clearance: Industrial companies at times have complex manufacturing processes (e.g. dual use goods) that require manufacturing in several countries. For these complex custom processes, freights has a higher feasibility than express (rather standardized)
- Standardized customs clearance: Express has advantages in quickly proceeding customs clearance of chemical samples since they have standardized and prepared documents
- High value: transports are performed by a special department in the freight logistics service provider
- Handling expertise: Freight logistics service providers have more expertise and experience in handling dangerous goods and is not as strict as express logistics service providers

What Shippers See as the most Important Purchase Factors and Further Key Factors to Chose Between Express and Freight

Ranking of the Most Important Purchase Factors

Mostly, the purchase factors were put in this order:

1. (Total) Cost
2. Performance
3. Value Added Services

- Furthermore, communication was rated as highly important
- At times the price-performance ratio was pointed out as important

Others such as high value and medical technology shippers put the purchase factors in this order:

1. (Total) Cost
1. Performance
2. Value added services

Key Factors in the Choice for Express or Freight

- Cutting weight (kgs): at times 30, 50 or 70 kgs, but at times also a daily, weekly or monthly adjusted cutting weights – however, only the on a regular basis adjusted cutting weights is an appropriate decision basis
- Besides a weight-based decision, the decision is often made on the basis contracts or urgency (production or other delay)
- In many cases consignments are being bundled on a weekly basis to achieve a cheaper freight transport
- ICT-platform (e.g. track & trace, estimated time of arrival applications, eDocuments and event monitoring) and logistics service providers adhering to it at times is a must for shippers
- Selection process considering prices and performances (e.g. applying key performance indices and minimum requirements)

What Value Added Services (and Related Trends) and Lanes the Shippers Most Rely on

Most used Value Added Services and related trends

- Track & Trace as a basic requirement (especially in express, but more and more also in freight)
- eDocuments, eBilling and ePayment are more and more required by the shipper (logistics service providers have to digitalize themselves)
- Dangerous goods (e.g. trend of built-in accumulators)
- Fragile goods and special packaging (e.g. electronics)
- Temperature controlled and odor-sensitive goods
- Bulky and fragile goods (e.g. sensor-modules)
- Special documents (e.g. chemical samples) and handling (e.g. fragile)

Most used Lanes

- #1 (15x): Switzerland - United States of America
- #2 (13x): Switzerland - China
- #3 (5x): Switzerland - France
- #3 (5x): Switzerland - Germany
- #4 (4x): Switzerland - Canada
- #4 (4x): Switzerland - Australia
- #4 (4x): Switzerland - India
- #4 (4x): Switzerland - Italy
- #5 (3x): Switzerland - Korea
- #5 (3x): Switzerland - Mexico
- #5 (3x): Switzerland - Saudi Arabia
- #5 (3x): Switzerland - Taiwan
- #5 (3x): Switzerland - United Arab Emirates

Agenda

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-

In addition to the compact conclusion of the study, insights into the limitations and outlook are given

Conclusion

- According to this study, on most of the evaluated lanes the cutting weight lays significantly higher than the known and wide-spread (definition-based) cutting weight of 30 kgs.
- The cutting weight and the related shift potential is derived through a scientific methodology. Therefore, interviews were held with 21 international airfreight shippers applying an interview-guideline complying with commonly accepted scientific standards. The qualitative part brought significant market insight and the quantitative part insight in cutting weights of 19 different lanes.
- The study points out the trade-offs between express and freight as well as relevant trends.
- This study (based on consignments flown in 2019) recommends to apply cutting weights of e.g. 79kgs for Switzerland - Australia, 153kgs for Switzerland - Canada, 59kgs for Switzerland - China, 166kgs for Switzerland - India, 291kgs for Switzerland - Mexico and 134kgs for Switzerland - United States of America. These and more cutting weights can be found in the study in more detail.
- A ranking of the most important purchase factors highlights that for most shippers the total cost-perspective is set before performance and value added services. However, key choice factors for shippers are listed.

Limitations

- Since only 21 interviews were conducted and 19 lanes have been analyzed, there is room for improvement (covering more lanes and markets). However, the 19 lanes analyzed represent 70% of this swiss foreign trade volume.
- The estimates applied in this study are simplified measures. E.g. the relationship between the express and freight-market is set at 30:70. Furthermore, this study applied the requested data-basis as a measure for consignment distribution over the weight range.
- The received data sets at times did not provide a clear picture of statistical results (cutting weight), what could be attributed to the relatively small data basis or the market proximity (e.g. Germany).

Outlook

- This study could be enhanced to other markets by applying the similar methodology to gather additional data.
- Furthermore, an advanced methodology could be developed to include the limitations of this study and strengthen it.

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