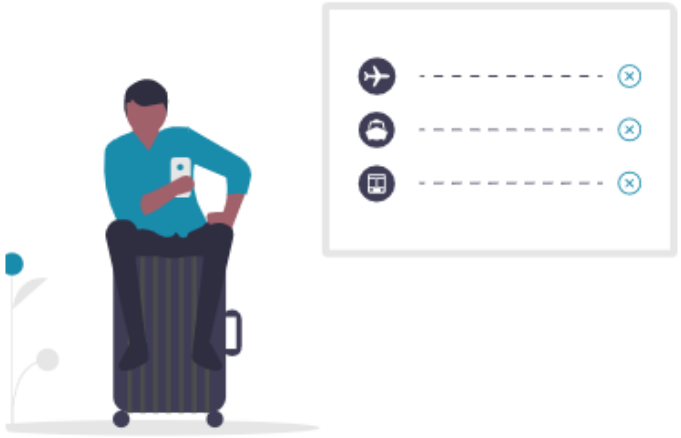
Case Study



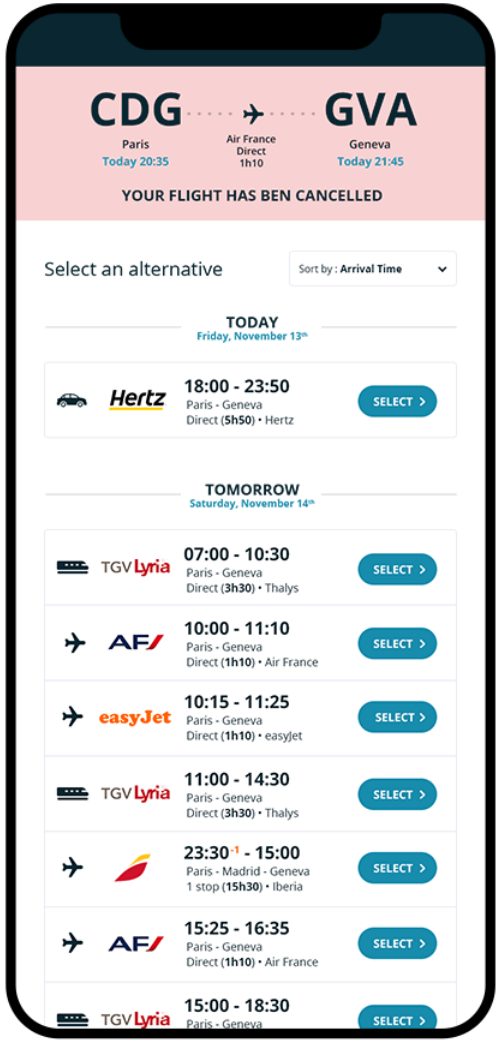
Disruption Recovery

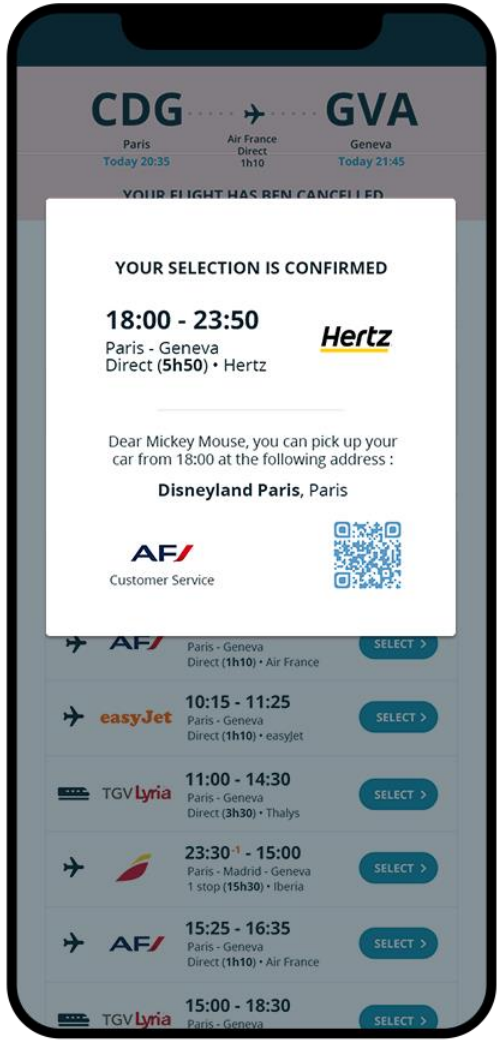
Disruption Recovery Platform

www.smooss.io

All of us has once felt like

Then imagine a world where





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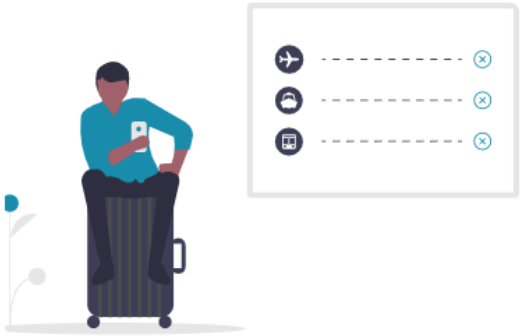


Disruption Recovery

SHIFT

AGENDA

1. The problem
2. How does it work today?
3. SMOOSS approach
4. About SMOOSS

3% of flights are disrupted
120M passengers are impacted worldwide

3%

of Flights are disrupted
Cancelled & delayed >2h

120M

passengers get dirsupted
worldwide

Source : 2018 – European commission - Study on the current level of protection of air passenger rights in the EU

Customers are disappointed with airline's recovery when facing disruption

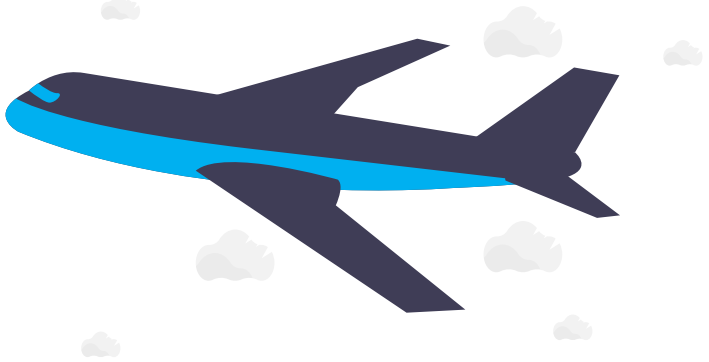
While airlines disruption costs already account for huge amounts

70%

passengers unsatisfied
with proposed solution
when facing a disruption

$20bn

Passenger Disruption Recovery costs
not taking into account
customer satisfaction &
repurchase



Source: 2019 IATA Global Passenger Survey

Source : 2018 – European commission - Study on the current level of protection of air passenger rights in the EU

What's more, multiple regulations worldwide frame how airlines must handle passengers
Generally structured around 3 pillars

1 Inform, care & assist

Disrupted carrier must
- Inform the passenger about the disruption
- Refund unexpected expenditures that she/he may incur, such as
  - Accommodation if required
  - Food & beverage
  - Phone calls
  - …

Also stated in ICAO and IATA Core principles

2 Re-route

Disrupted carrier must provide passengers with a solution to get to their destination, including if operated by other airlines.

Example for EU261
"When passengers have a reservation for flight that is cancelled a maximum of two weeks before the scheduled departure time, they are entitled to the choice of either a rebooking with the same airlines or a ***re-routing on either an alternative transport or on an alternative airline*** *regardless of whether the cancellation is airline-attributable."*

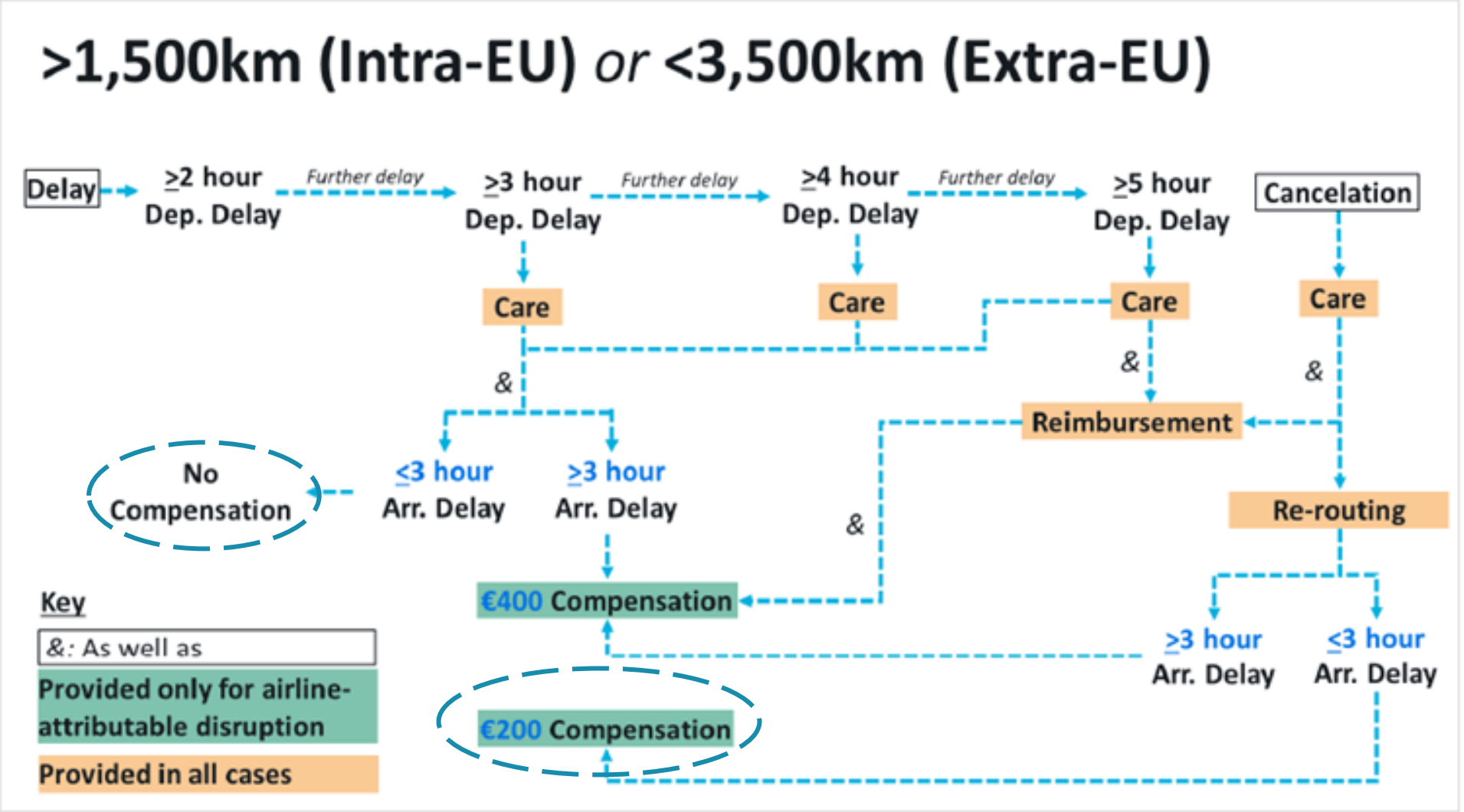
3 Compensate

Disrupted carrier must compensate financially impacted passengers.
Compensation values differ per areas and flight ranges.

A re-routing close enough to the initial scheduled flight enables the disrupted carrier to avoid totally or partially the compensation

Source : 2018 – European commission - Study on the current level of protection of air passenger rights in the EU

Example of the European regulation EU261
No compensation or compensation cut by 50% if delay < 3 hour

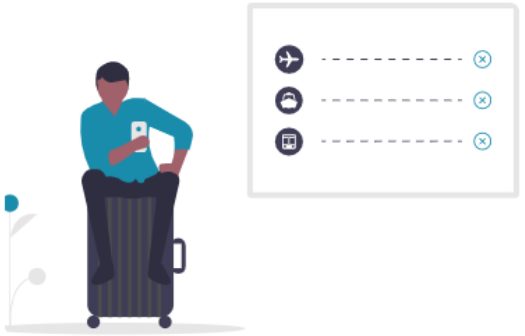


Source : 2018 – European commission - Study on the current level of protection of air passenger rights in the EU

Disruption costs breakdown for a claiming pax by main cost items

NPS = Net Promoter Score

smooss



Disruption Recovery

SHIFT

AGENDA

- The problem
- How does it work today?
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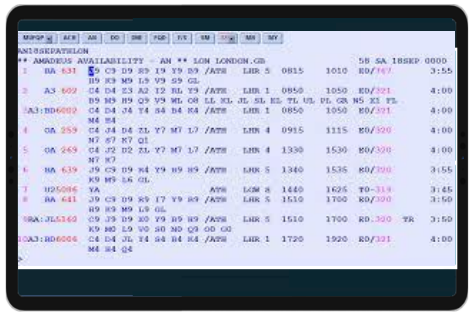
- About SMOOSS

How does it work today?

① Airline rebooks passengers mostly on its flights, at booking level or massively

- In case of operational disruption that requires to provide a new itinerary to the passengers, the operating airline will reaccommodate passengers on alternatives
- In most cases, the airline will **rebook passengers on its own operating flights**
- Existing rebooking solutions enable airlines to rebook
  - **Booking by booking**, the airline frontline or back-office agent choosing the alternative for the customer
  - **Massively**, through **optimizers** weighting multiple factors such as loyalty, customer value, cost per alternative, etc.



② Passengers are informed and receive their new booking

- Passenger is informed of the operational disruption on its initial itinerary
  - He may proactively be presented with a **rebooking solution** by the airline
  - Or he may need to **call** the customer service or **request** a rebooking solution at the airport desk
- It is not often that passengers can choose the **alternative of their choice**
- Passengers can claim afterwards the **regulatory compensation** they are entitled to

Airlines can enlarge the scope of alternatives by rebooking on other airlines

Focus on rebooking on IATA member airlines
Under IATA Resolution 735d

1 Conditions for application of the IATA Resolution 735d

1. The operational disruption need to be identified as an **Irregular Operation (IROP)**
   - It prevents the customer from using the flights initially booked
   - It has occurred on the day of travel or the day before

   ➔ This rule is to distinguish IROP from planned schedule change

2. There must be a **bilateral agreement** between the disrupted carrier and the intended new operating carrier to rebook using standard Interline procedures of IATA Resolution 766
   - If such an agreement is not in place, the disrupted carrier must contact the New Operating Carrier before obtaining inventory
   - Rebooking on a higher cabin is not allowed if not bilaterally agreed

2 Operational process: rebooking and ticketing

1. Identify and take control of impacted coupons

2. **Reissue ticket** for replaced coupons using the indicator "**INVOL**" in the endorsement field. The fare calculation can also start with the prefix "I-"
   All information of the initial ticket, including baggage allowance, is carried forward to the reissued ticket

3. Transfer **control** to new operating carrier ready for check-in

Major PSS and GDS platforms provide these capabilities.

3 Cost of new booking: billing and settlement

Airlines can either
- **bilaterally agree** on **any settlement method**
- follow the **Multilateral Prorate Agreement** (MPA), which provides a **standard proration**, namely the new operating carrier bills the value that would have accrued to the disrupted carrier on the impacted coupons

In order to bill the disrupted carrier, the new operating carrier should consider the "INVOL" endorsement as valid only if
1. Ticket reissue occurred two days or less from the first scheduled departure date on the reissued ticket (**2 days rule**)
2. The coupon to bill does not have a departure date more than five days from the date of reissue (**5 days rule**)

Sources: IATA, Interline Considerations on Irregular Operations (IROPs), 2020
IATA, Important Changes to Standards Supporting Involuntary Flight Changes, 2019

IATA Resolution 735d has proved to be extremely powerful for passenger disruption recovery
And it can still be further improved

1 Scope of carriers lack low-cost airlines and ground carriers

Only IATA member airlines can be offered as alternative under IATA Resolution 735d, lacking

1. **Low-cost airlines** which now account for ca. 40% of the seats operated by airlines ww
2. **Ground carriers** (train, bus, car rental…)

This contractual limitation also comes with a **technical one.** Indeed reaccommodating under IATA Resolution 735d goes through **traditional ticketing standards**, while most low-cost carriers are **ticketless**, and neither are ground carriers

NDC will also be an enabler to allow **smoother passenger transfers** between 2 different airlines from PNR data and services to settlement.

2 Customer choice is not taken into account beforehand

- Customer generally receives a new solution for rebooking **without being presented with different options beforehand**.
  If she/he wants a different option, she/he needs to **call the customer service** or request a new solution at the **airport desk**
- **Travel agents** are often not involved in the process, as disruption handling is the responsibility of the operating airline.
  However, many customers will turn to their agents, especially for travel management companies (TMC), to get a solution, while the latter often lack information.
- **Ancillaries** (extra bag, seats options…) transfer are not well supported by existing standards.

3 Complex monitoring

Complex billing processes make it difficult for airlines to have a clear picture on

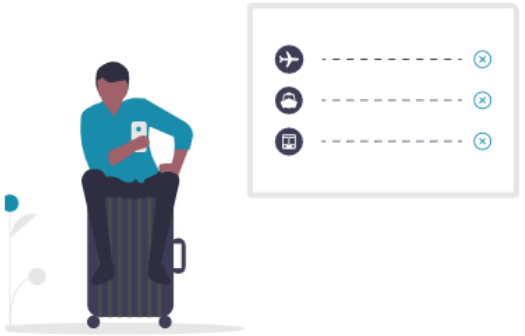
1. Their **disruption re-routing costs** on other airlines
2. Volumes and revenue reissued on their metal which may cause **revenue dilution**

The industry acknowledges significant billing rejections and disputes between airlines.

IATA member airlines do not promote to customers the insurance they provide one to another while it is a **strong marketing argument**

Source: IATA, Airline Industry Retailing (AIR) Think Tank, Project Lemonade, 2019

smooss



Disruption Recovery

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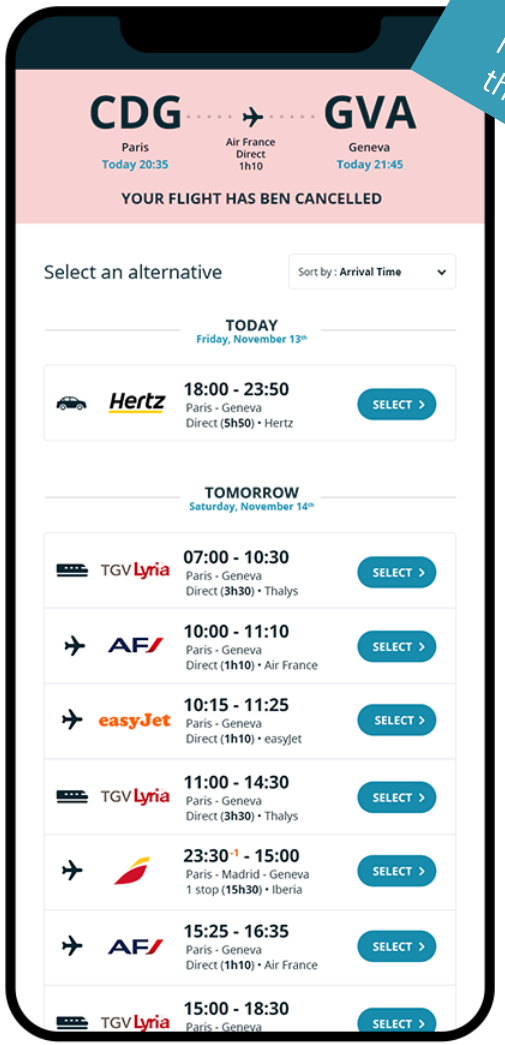
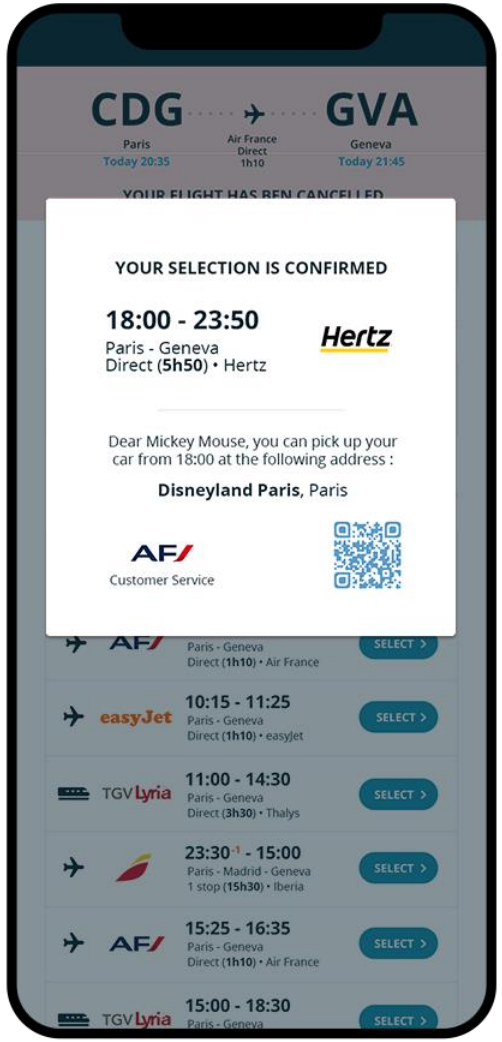
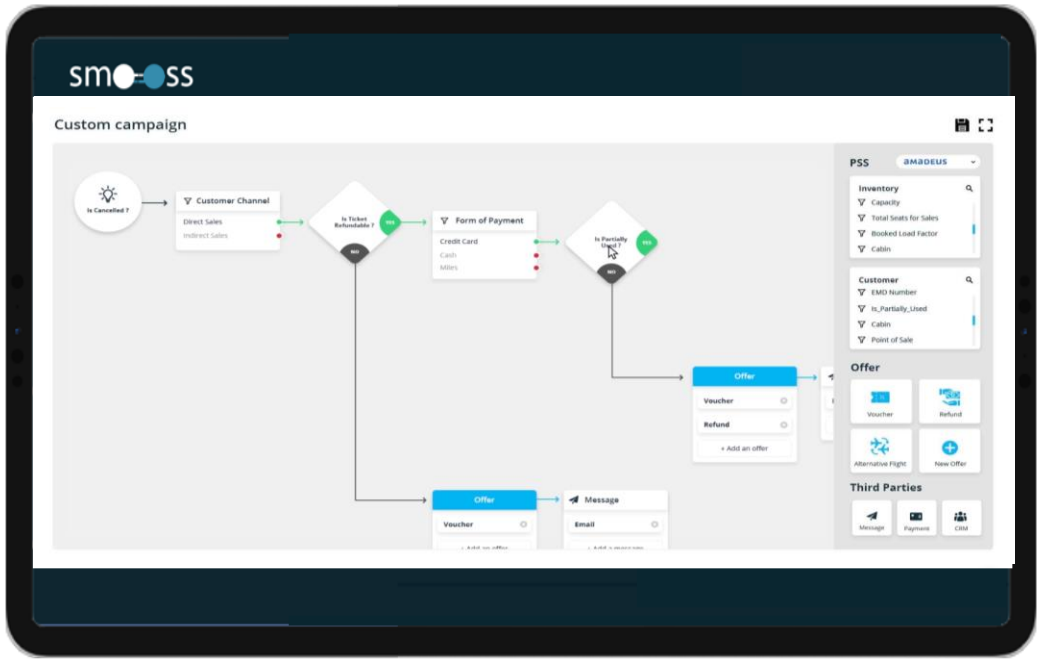
Let’s start by asking passengers what they want
Offering them any alternative

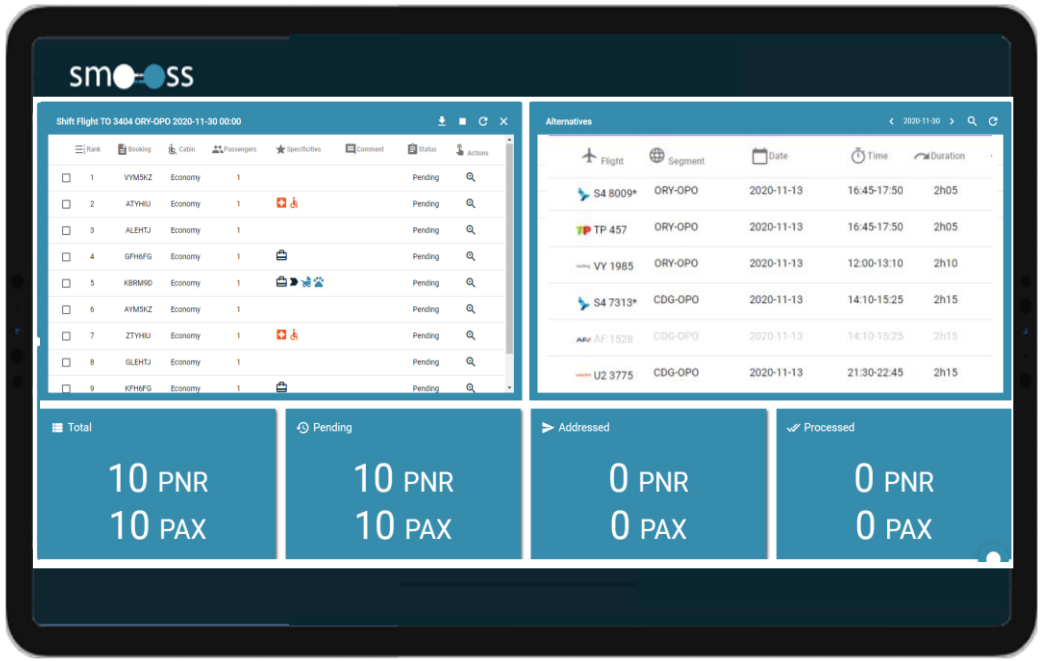
Passengers may also choose to cancel their trip and get instantly refunded in cash or through a voucher





While the airline remains in control
For massive handling, or booking by booking



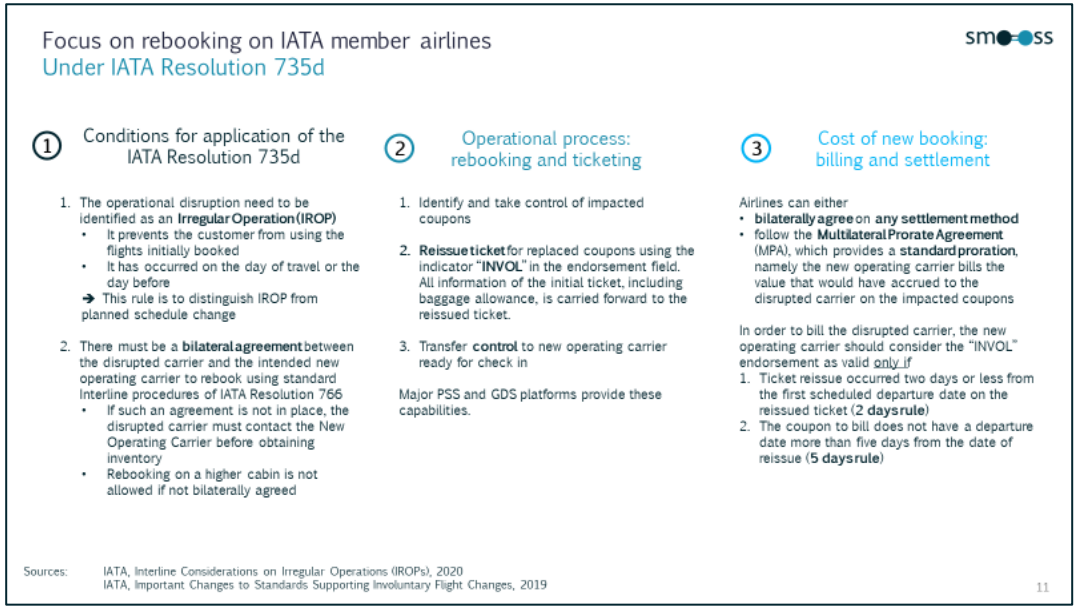


① Set business rules for automated massive handling

or

② Or select alternatives to be offered booking by booking

Rebooking is automatically processed
Either using IATA Resolution 735d when applicable; or by processing a new booking



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Sources: IATA, Interline Considerations on Irregular Operations (IROPs), 2020
IATA, Important Changes to Standards Supporting Involuntary Flight Changes, 2019

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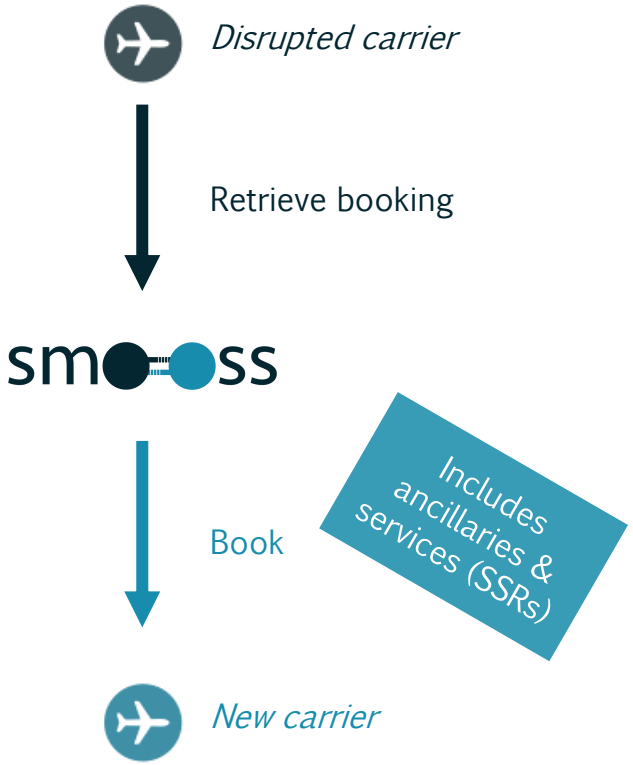


① Use IATA Resolution 735d and industry ticketing standards when applicable

and

② Process a new booking on any carrier

Airlines can benefit from their existing bilateral agreements under IATA Resolution 735d

While negotiating new agreements and disruption fares in full compliance with IATA guidelines

IATA

Bilateral Agreement for Obtaining Inventory Following an Irregular Operation [To use this template, delete or replace any red text].

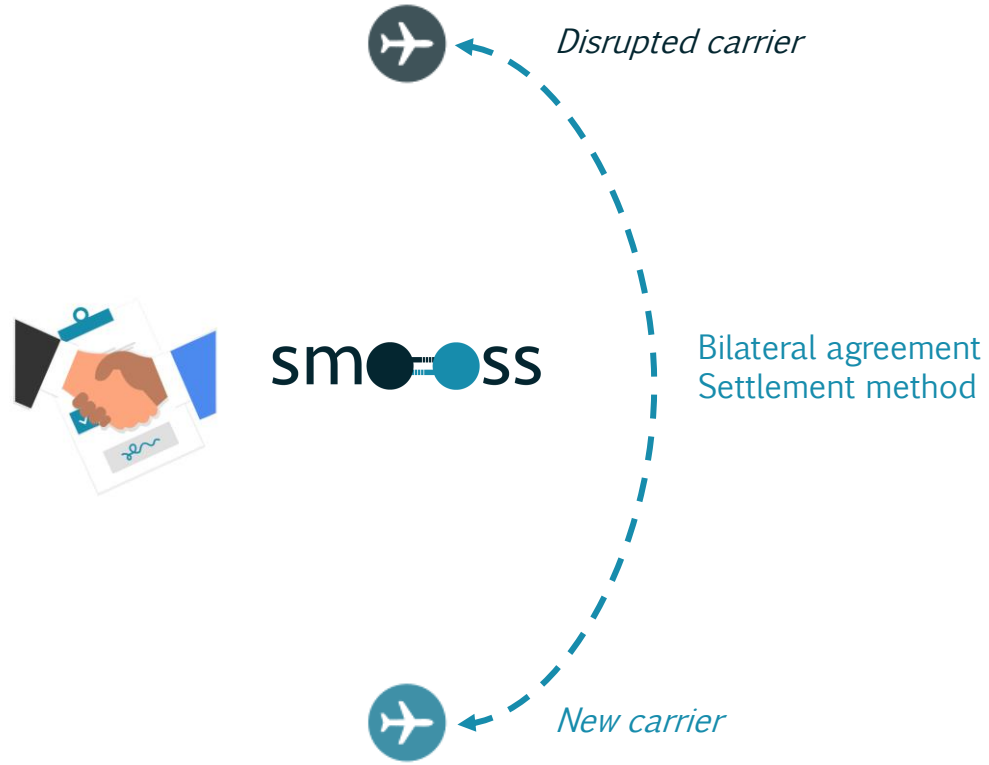
This agreement describes the booking method (as described in IATA Resolution 786, Paragraph 12) that may be used when involuntary re-routing is required following an irregular operation. This agreement only applies where an irregular operation as defined in IATA Resolution 735d has occurred. This is limited to events that occur on the day of departure of the first impacted flight, or the day before.

	Part I	Part II
Inventory request made by	[Airline 1 name]	[Airline 2 name]
For inventory on a flight operated by	[Airline 2 name]	[Airline 1 name]
Method of obtaining inventory	Existing Sales Availability Agreement between the carriers (Sell and Report or Free Sale, Direct Access or other contracts granting selling facilities). [OR delete the text above, and insert details of the agreed method, such as email or telephone contact, including contact numbers].	Existing Sales Availability Agreement between the carriers (Sell and Report or Free Sale, Direct Access or other contracts granting selling facilities). [OR delete the text above, and insert details of the agreed method, such as email or telephone contact, including contact numbers].
Number of seats	Existing quota sale limitation of existing Sales Availability Agreement. [OR delete the text above and insert details around limitations in what can be booked].	Existing quota sale limitation of existing Sales Availability Agreement. [OR delete the text above and insert details around limitations in what can be booked].
Reservation Booking Designator (RBD) usage	The RBD in which inventory is booked should be the same RBD as the original flight segment where this is available. [OR, indicate if there is a specific mapping of RBDs (which you may wish to attach as an Appendix)]. Where this RBD is not available, the next highest open RBD should be booked. [OR, indicate if there is a default RBD which should be booked, or a separate process which should be followed if the correct RBD is not available]	The RBD in which inventory is booked should be the same RBD as the original flight segment where this is available. [OR, indicate if there is a specific mapping of RBDs (which you may wish to attach as an Appendix)]. Where this RBD is not available, the next highest open RBD should be booked. [OR, indicate if there is a default RBD which should be booked, or a separate process which should be followed if the correct RBD is not available].

1 Bilateral Agreement for Obtaining Inventory Following an Irregular Operation

*"This bilateral agreement may follow **any form** [...] This is entirely up to each airline"*, IATA

*"The Multilateral Prorate Agreement (MPA) also defines industry Standards for proration in Involuntary Rerouting scenarios. Carriers **may bilaterally agree to follow different Standards in determining billing values.**"*, IATA



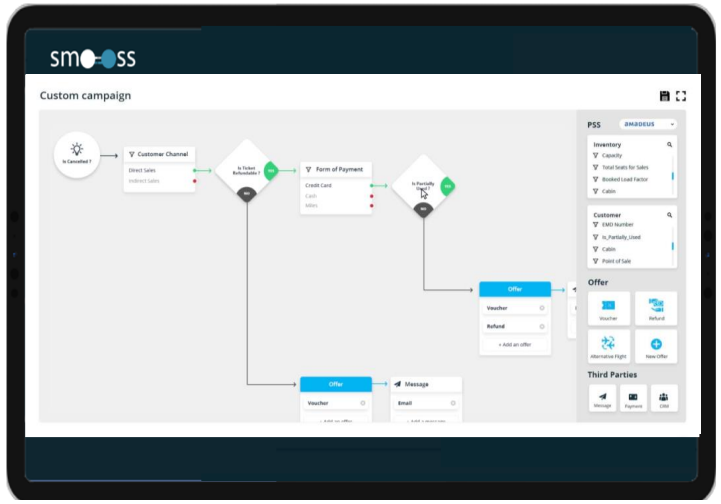
① Use IATA recommended framework for bilateral agreement and financial settlement through standard proration

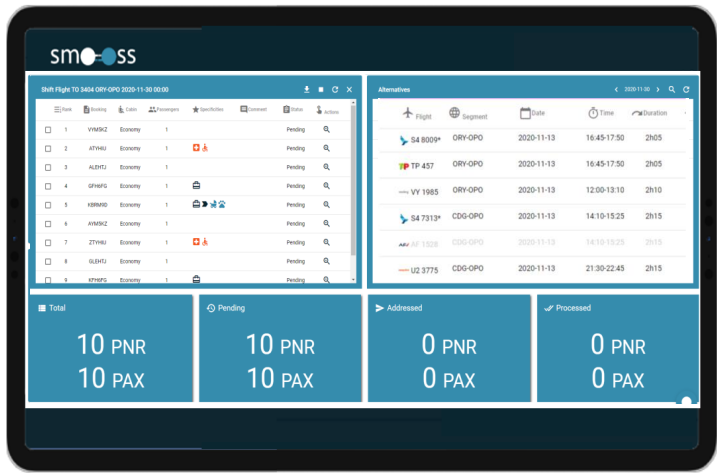
and

② Bilaterally agree through SMOOSS platform on any disruption fares and settlement method

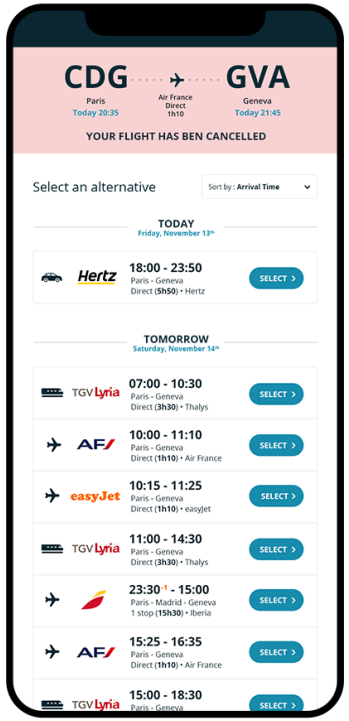
In the end, SMOOSS Disruption recovery platform gives back the control to airlines and passengers…

① Airline sets business rules for massive handling or booking by booking

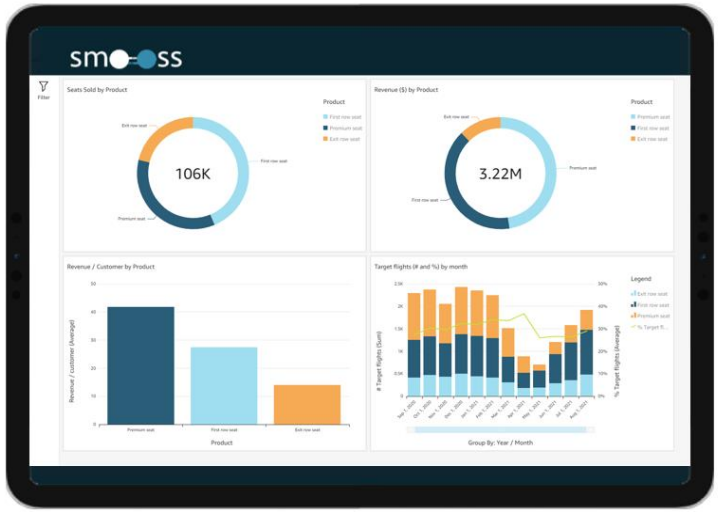




② Passenger is notified and chooses its alternative

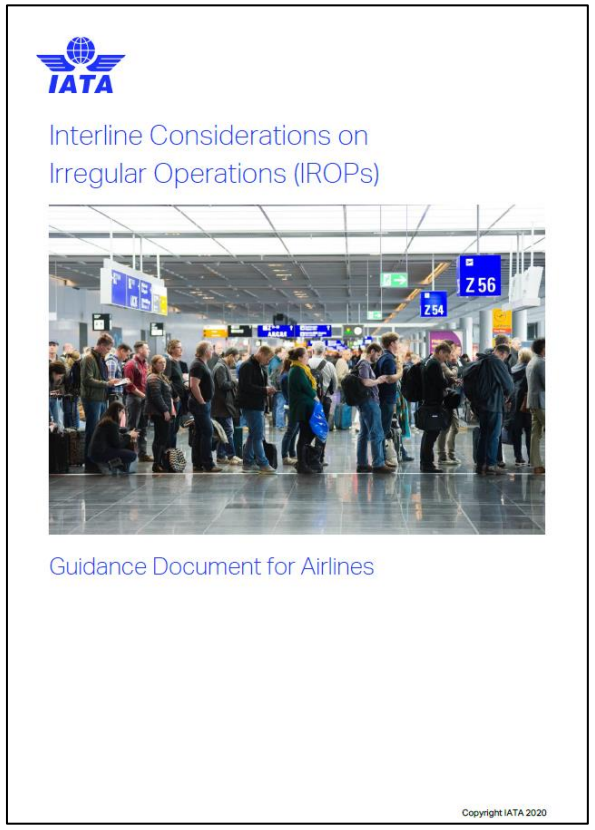


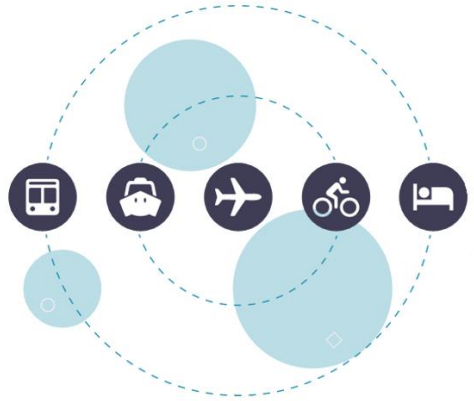
③ Airline monitors its disruption costs



… using existing IATA standards when applicable

While complementing them with additional flexible solutions in full compliance with IATA guidelines



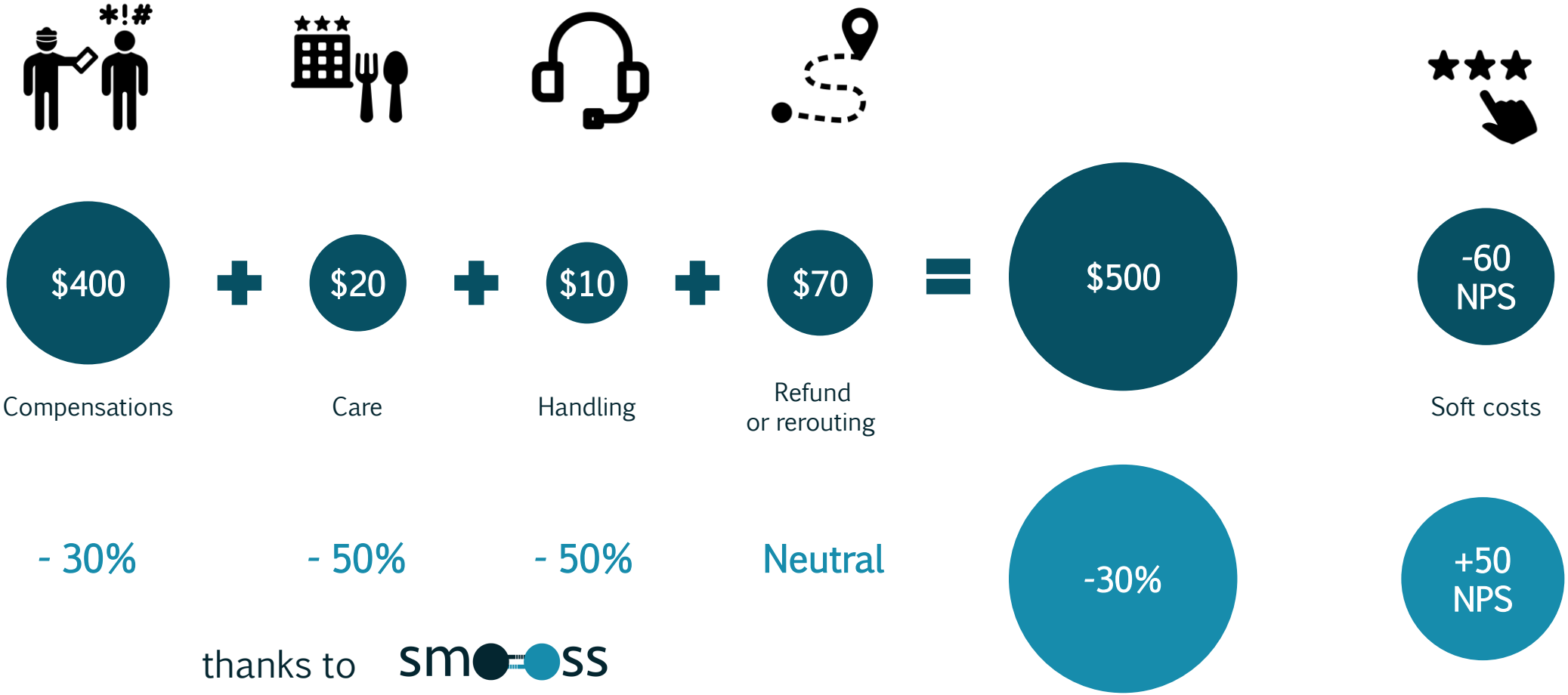


"Whilst the IATA Standards form the basis of many long-established Interline relationships it is acknowledged that ***many carriers may not follow these Standards since they operate under a different model (e.g. Ticketless).***

Carriers may wish to consider ***entering relationships for the purpose of ensuring enough connectivity to continue offering enough and effective involuntary rerouting opportunities."***

IATA, Interline Considerations on Irregular Operations (IROPs), 2020

By enlarging the scope of alternatives, SMOOSS helps airlines reduce disruption costs by 30%
While improving NPS, further fostering customer loyalty and repurchase

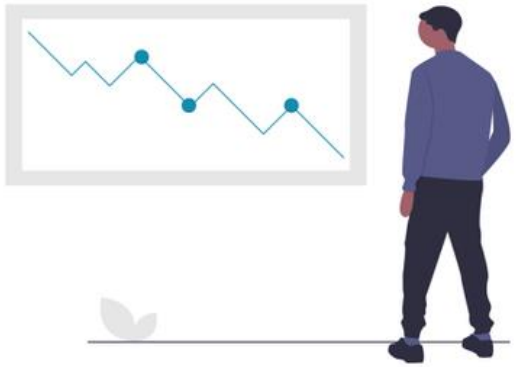


(*) Net Promoter Score

Our in-house model can forecast your costs savings route by route

Your Disruption Costs analysis route by route

Thanks to our in-house analysis solution, we can provide you with a detailed analysis of your disruption costs taking all the specifics of the carrier and routes



Download your FREE Disruption Costs Analysis

https://smooss.io/home/disruption-recovery

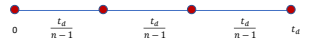
Yearly Variable Margin for an average airline

Airline route hypothesis	Baseline ie. Rebooking only on same airline	SHIFT ie. Rebooking on all airlines	Delta (abs)	Delta (%)
# Daily flights - Initial carrier	3	3	=	
# Daily flights - Alternative carriers	3	3	=	
Total number of alternatives	2	5	3	
Time range of flights departure per day (hours)	12	12	=	
Compensation hypothsesis & cost				
Compensation value (€)	400	400	=	
Claim rate	50%	50%	=	
Compensation cut if shorter delay	50%	50%	=	
Arrival shorter delay threshold (hours)	3	3	=	
Departure antcipation (hours)	1	1	=	
Total time range for alternatives cutting compensation (hours)	4	4	=	
Frequency of compensation cut	0%	70%	70%	
Avg compensation cost per disrupted passenger (€)	**200**	**130**	**-70**	**-35%**
Accomodation hypothsesis & cost				
Accomodation price (€)	100	100		
Accomodation frequency need	50%	20%		
Avg accomodation cost per disrupted passenger (€)	**50**	**20**	**-30**	**-60%**
Avg costs savings from SHIFT per disrupted passenger (€)	**250**	**150**	**-100**	**-40%**

Methodology

. We assume Initial carrier's flights of number n are distributed evenly accross the Time range of flights departure (td). So there is an alternative for a given flight within the Time range for alternatives cutting compensation (tc) if and only if

$$\frac{t_d}{n-1} < t_c$$



. We assume alternative flights are evenly distribued accross the Time range of flights departure (td), ie. they follow a continuous uniform distribution. So the probability that there is an alternative flight in the time range tc writes

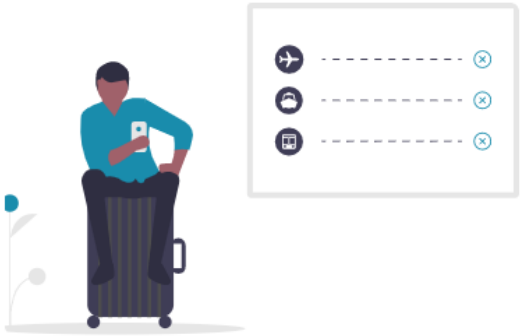
$$\frac{t_c}{t_d}$$

So the probability that there is at least one alternative in the time range tc, among a total of p alternatives evenly distrbiuted in the time range tc writes

$$1-(\frac{t_d-t_c}{t_d})^p$$

Availability on alternatives are not taken into account

smooss



Disruption Recovery

SHIFT

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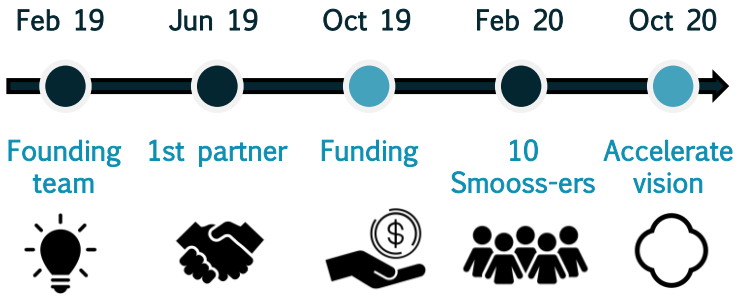
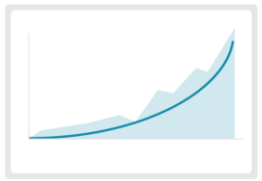
Who are we?
10 SMOOSS-ers with airline and technology background

6 use cases live in 12 months





4 live partners 6 trial partners

AIRFRANCE

transavia

CORSAIR

KLM


2


2


2

3M+ processed passengers 4 achievements

Airline industry by design

IATA PLUGANDPLAY

Cybersecurity is our priority

AICPA SOC

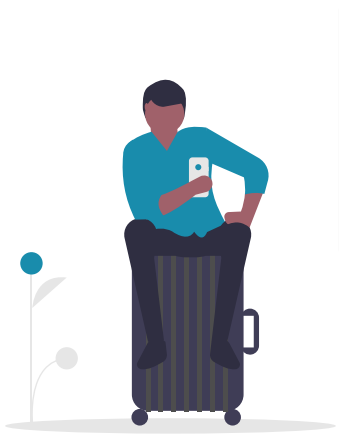
Certification by Dec 20

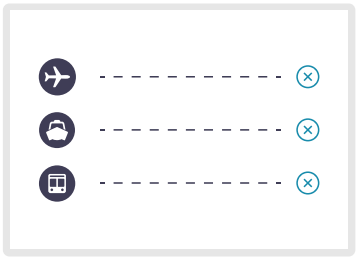
AI partnership

data iku

SMOOSS builds-up on a strong track-record

Helping airlines manage flight cancellations through Covid crisis





Commercial policy management

Automate voucher issuance and refund according to your commercial policy

Holistic Disruption Recovery Solution

Take care of your customers impacted by operational disruption

March 2020
Start of COVID 19 Crisis

May 2020
Need to Redeem

September 2020
Restore Customer Confidence

Voucher Redeem

Automate voucher redemption through an API integrated to your website

AIRFRANCE CORSAIR

2,000,000+

Happy customers thanks to SMOOSS Disruption Recovery

+47 NPS

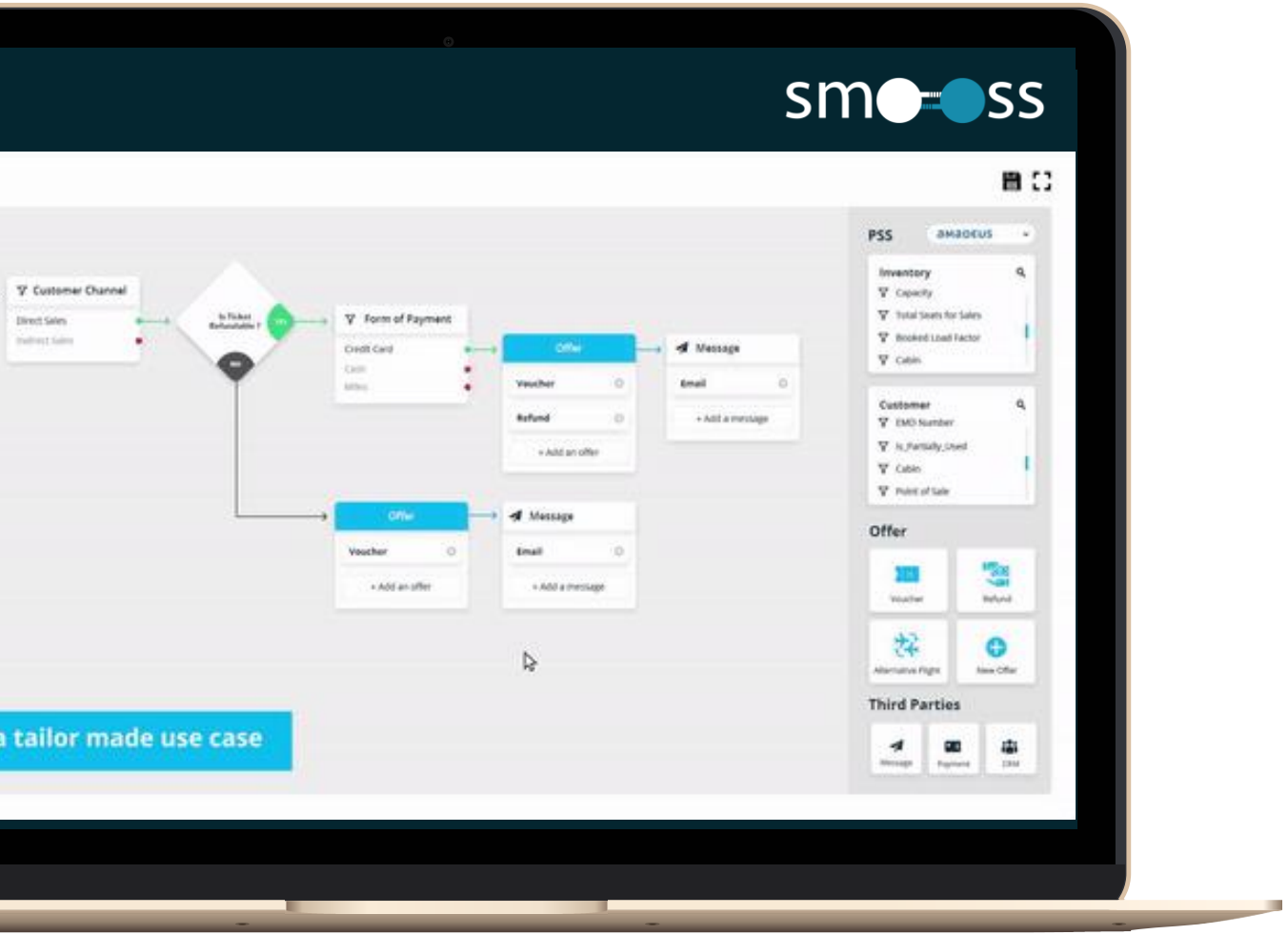
Best-in-class recovery leads customer preference and repurchase

-30%

Disruption Costs

SMOOSS SaaS Platform is powered by our in-house layer on top of reservation systems

Towards a low-code visual builder to create use cases according to customer needs



Connect to the Inventory & Reservation System (PSS) through Web Services/APIs

An agnostic layer providing main reservation features: book, change, refund, issue and redeem vouchers, add ancillary

Design and implement a use case in a few weeks thanks to our low code approach

Connect to any third-party: messaging systems, payment providers or other reservation systems (taxi, accommodation…)

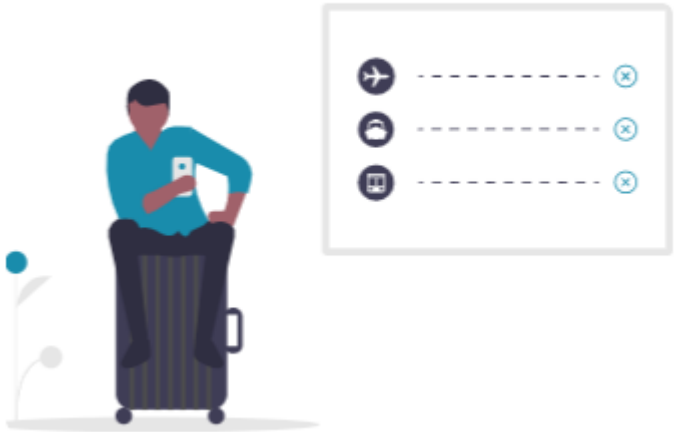
SMOOSS journey starts with after-booking
through our Upsell and Disruption recovery Platforms for travel players

Upsell Platform

Offering a personalized experience
through innovative ancillaries

Disruption Recovery

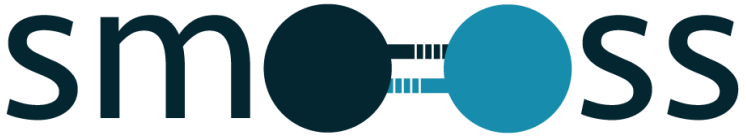
Restoring customer confidence
through a SMOOSS journey



Customized solutions

End to End process automation

A White Box Approach



Want to learn more ?

Contact us!

contact@smooss.io

www.smooss.io