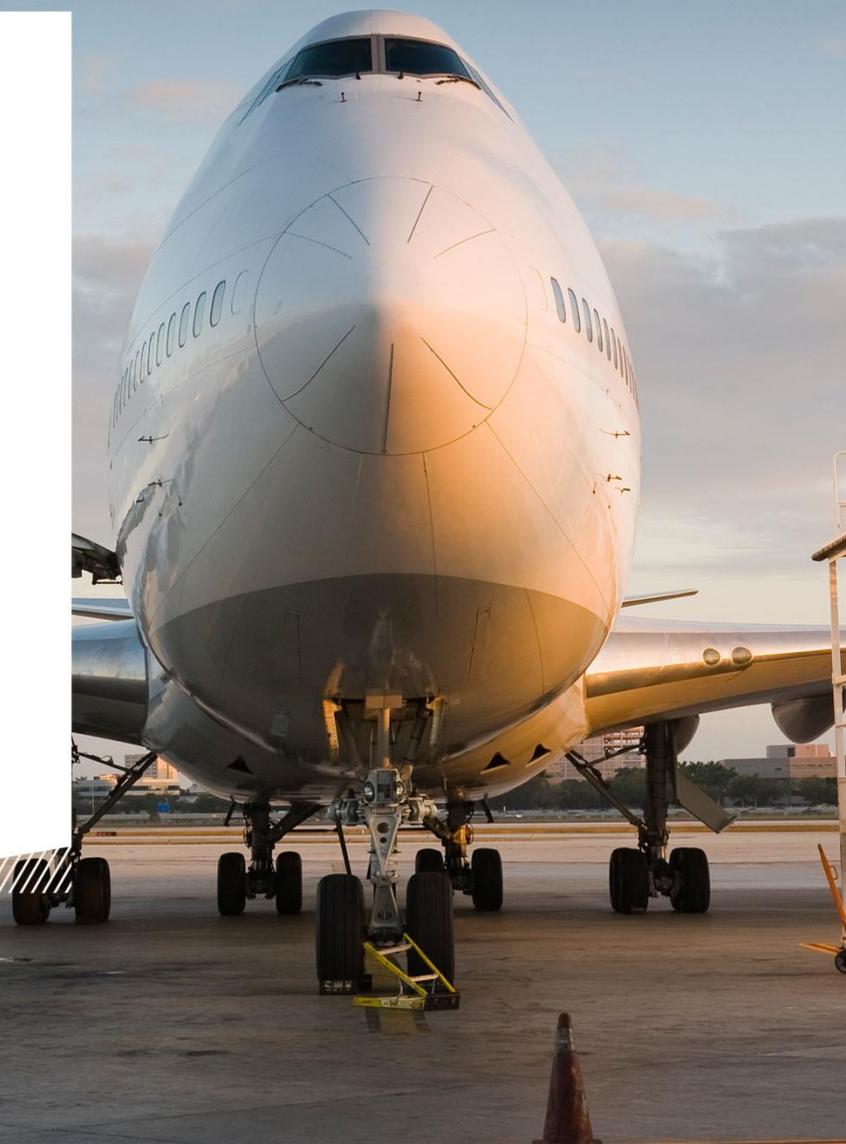


BEONTRA

B Route Development

Version 3.5.0
Release Notes

14th March 2018



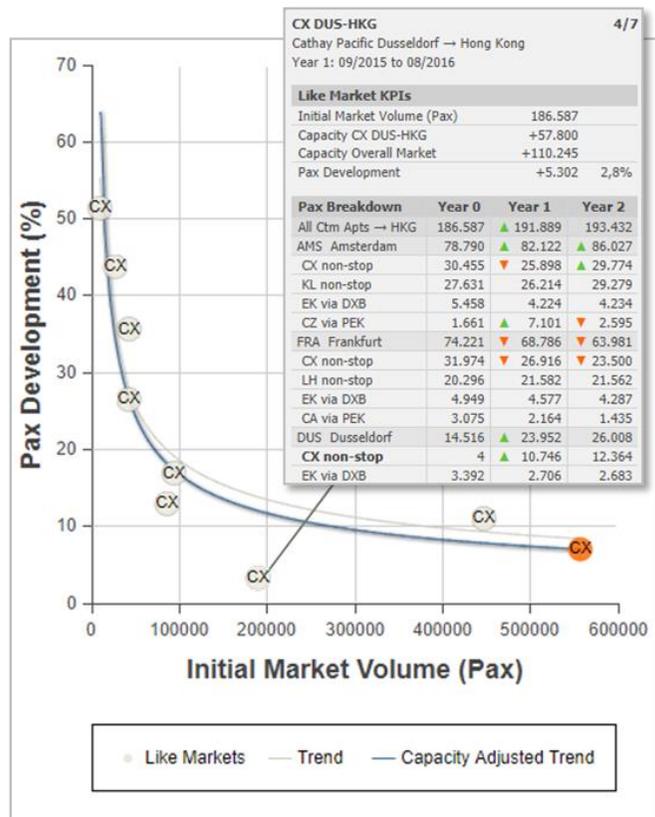
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Improved Market Stimulation Methodology

- Redesigned, easy to understand stimulation curve
- Detailed insights into Like Market development
- Hints on further market development in year 2

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Highlights of the Improved Stimulation & Growth Methodology



Redesigned, easy to understand stimulation curve

- Initial market size is used as the basis (x-axis), which is widely used in common stimulation models.
- Simplifies understanding and comparing Like Markets.
- Automated calibration of the trend curve to take into account the different levels of capacity added.



Detailed insights into Like Market development

- Find the capacity and pax development for the carrier and the overall market at a glance.
- Understand growth effects and traffic shifts between airports and carriers (cannibalization).



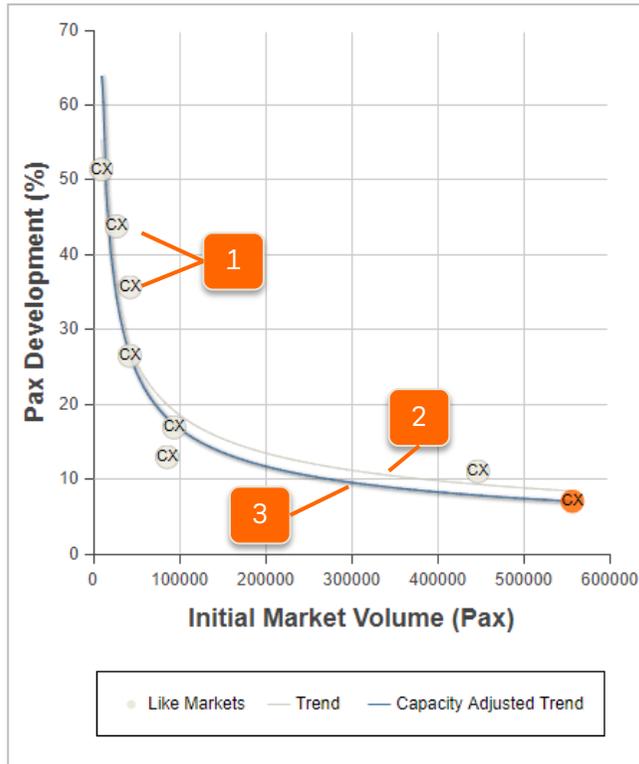
Hints on further market development in year 2

- The trend curve and projected stimulation rate are based on the development at the Like Markets in year 1 (first 12 months after launch).
- Get a hint on the long-term growth effect from the analysis of the Like Markets' development in year 2.

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Stimulation Methodology Description (1/2)

The objective of the Growth & Stimulation section is to project the market growth. A growth rate for the first year of operation is suggested, whereby a near-term commencement is assumed. The analyses help understand to which degree the carrier is expected to create new demand rather than to cannibalize other carriers or catchment airports. For the point-to-point route, the market growth is based on a stimulation curve as described below. For beyond routes, a different approach is used (natural market growth, please refer to the user guide for details). The methodology for beyond routes has not been changed.



1

Like Markets (Gray Bubbles)

A stimulation curve is individually created for your scenario based on Like Markets, i. e. similar routes which have been launched since 2008. These may be routes by the target carrier, routes by any carrier from your airport or to the destination market or even other routes that show similarities to the market that your route study refers to. You can customize the selection of Like Markets, e. g. to create a purely carrier specific or market specific trend curve, depending on what makes most sense to you in your scenario.

2

Like Market-Based Trend Curve (Gray Line)

The gray line shows the correlation between initial market volume in the 12 months period before the launch ("Year 0") and pax development (market stimulation) in the first 12 months after the launch ("Year 1"). Typically, smaller markets experience a higher relative growth than large markets. The curve is determined through a regression analysis of the Like Markets. Since a power function is used, only Like Markets with an initial market size of at least 1 pax and a positive pax development are considered to create the trend.¹⁾

3

Capacity-Adjusted Trend Curve (Blue Line)

Besides the initial market size, the amount of capacity added is another important factor influencing the stimulation rate. An additional regression analysis is used to assess the correlation between capacity and pax development. The result is used to calibrate the trend curve to the level of additional capacity proposed in your scenario. Typically, if the proposed capacity of your new service is above the average capacity added at the Like Markets, the blue trend curve will be above the gray trend curve. However, this may differ depending on the initial market size. Usually capacity has a lower influence at large markets.

1) Negative values or 0 cannot be used in power functions.

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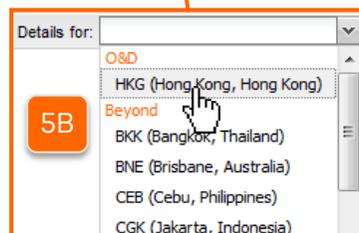
Using the Stimulation & Growth Section

This section provides an overview of the results of the market growth analysis for the point-to-point route and beyond destinations. The tool has automatically suggested results which you may verify and adjust.

- 1 Short description of the methodology
- 2 Summary of the main results
- 3 Visualization of the geographic location of your airport and catchment airports
- 4 Visualization of the geographic location of destination airports and market size. Move the mouse over a destination to view the status quo market volume and the expected growth of traffic from your catchment area to this destination.

To view the detailed calculation process of the expected growth for a destination and to perform individual adjustments:

- 5A Click on a destination in the map
or
- 5B Select a destination from the dropdown menu



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Using the Stimulation & Growth Section: Step 1

After you have selected the point-to-point destination from the map, the detailed calculation path for the expected growth is displayed.

Route Development | **Catchment Growth Map** | Natural Market Growth

Project Set-Up | Detailed Calculation for Destination HKG | Like Market Selection **NEW** **A**

Route Forecast | Map Overview | Excel Export | Limit: Top 20 | Excel Export

Route Parameters

- Frequency & Capacity
- Schedule
- Catchment View**
- Status Quo
- Growth & Stimulation**
- Airport Market Share
- Carrier View**
- Carrier Market Share
- Operating Costs

Business Case Results

Scenario Overview

BHX → HKG
CX (Cathay Pacific)

Year-Round 3/7 A330
Exp. Onboard Pax 25,209
Seat Load Factor 66,46%

Route case is complete.

1) Like Market Selection **0** **1**

Selection of already launched routes with similarities to the proposed service BHX-HKG on CX.

2) Suggested Growth 7,03%

Estimation of the growth of the catchment market volume to HKG based on actually achieved market growth rates at the Like Markets.

3) Adjusted Growth 7,03%

Optional: User specific adjustment of the market growth rate based on own judgement of the individual market properties.

4) Expected Catchment Market Volume 596.055 Pax

Calculation of the overall number of pax departing from my airport and the catchment airports, including non-stop and indirect traffic, irrespective of carrier.

Like Market Selection

Like Market	Frq	Inaugur...	Market Vol	Pax/Dev	Similarity
<input checked="" type="checkbox"/> CX MAN-HKG	4/7	12/2014	85.872	12,95%	●●●●●
<input checked="" type="checkbox"/> CX MXP-HKG	4/7	03/2010	26.871	43,78%	●●●●●
<input type="checkbox"/> CX DUS-HKG	4/7	09/2015	186.587	2,84%	●●●●●
<input checked="" type="checkbox"/> CX LGW-HKG	5/7	09/2016	446.995	11,02%	●●●●○
<input checked="" type="checkbox"/> CX ZRH-HKG	6/7	03/2015	42.602	35,66%	●●●●○
<input type="checkbox"/> CX MAD-HKG	4/7	06/2016	26.415	3,96%	●●●●○
<input checked="" type="checkbox"/> CX BCN-HKG	4/7	07/2017	9.454	51,38%	●●●●○
<input type="checkbox"/> CX DME-HKG	3/7	07/2010	22.584	136,30%	●●●○●
<input checked="" type="checkbox"/> CX TLV-HKG	4/7	03/2017	42.274	26,49%	●●●○●

New Routes by Cathay Pacific

New Routes ex BHX

<input type="checkbox"/> AI BHX-DEL	4/7	08/2013	278.909	-1,50%	●●○○○
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New Routes to HKG

<input type="checkbox"/> OS VIE-HKG	4/7	09/2016	17.503	44,22%	●●●●○
<input type="checkbox"/> SK ARN-HKG	5/7	09/2015	17.042	57,37%	●●●●○

Alternative New Routes

<input type="checkbox"/> CZ LHR-CAN	5/7	06/2012	19.162	44,01%	●●●○●
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0 Process Steps

Click on one of the items for details.

1 Step 1: Like Market Selection

- View a list of launched routes that the system has identified.¹⁾

NEW

- For a better overview, the Like Markets are grouped. Each Like Market will only be displayed in the first applicable group, e. g. Cathay routes to HKG in "New Routes by Cathay Pacific", but not in "New Routes to HKG".

- Optional: Use the check boxes to select the most relevant Like Markets to be included into the trend analysis.²⁾

A Use the *Limit* drop down menu to examine more Like Markets if needed.

- For each Like Market, you can see how the pax volume has developed in the first 12 months after the launch. Note that this development is analyzed for the overall catchment area of the origin airport.
- By default, the 10 Like Markets with the highest similarity are activated, irrespective of the group. The similarity is calculated based on geographic location, carrier properties (legacy vs. LCC, alliance), market size and competition.

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Using the Stimulation & Growth Section: Step 2

2 Step 2: Suggested Growth

A Mouseover Function: Like Market KPIs

B Mouseover Function: Pax Breakdown

NEW

1) Like Market Selection
Selection of already launched routes with similarities to the proposed service BHX-HKG on CX.

2) Suggested Growth
Estimation of the growth of the catchment market volume to HKG based on actually achieved market growth rates at the Like Markets.

Like Market KPIs

Initial Market Volume (Pax)	186.587	186.587	186.587
Capacity CX DUS-HKG	+57.800	+57.800	+57.800
Capacity Overall Market	+110.245	+110.245	+110.245
Pax Development	+5.302	+5.302	+5.302
		2,8%	2,8%

Pax Breakdown

	Year 0	Year 1	Year 2
All Ctm Apts → HKG	186.587	▲ 191.889	193.432
AMS Amsterdam	78.790	▲ 82.122	▲ 86.027
CX non-stop	30.455	▼ 25.898	▲ 27.123
KL non-stop	27.631	26.214	26.214
EK via DXB	5.458	4.224	4.234
CZ via PEK	1.661	▲ 7.101	▼ 2.595
FRA Frankfurt	74.221	▼ 68.786	▼ 63.981
CX non-stop	31.974	▼ 26.916	▼ 23.500
LH non-stop	20.296	21.582	21.562
EK via DXB	4.949	4.577	4.287
CA via PEK	3.075	2.164	1.435
DUS Dusseldorf	14.516	▲ 23.952	26.008
CX non-stop	4	▲ 10.746	12.364
EK via DXB	3.392	2.706	2.683

Scenario Overview
BHX → HKG
CX (Cathay Pacific)
Year-Round
Exp. Onboard Pax
Seat Load Factor

CX DUS-HKG
Cathay Pacific Dusseldorf → Hong Kong
Year 1: 09/2015 to 08/2016

4/7
7,03%

55 Pax

2,8%

7,03%

2

A

B

1) Year 1 = first 12 months after the launch
Year 0 = preceding 12 months

If the route has been in operation for less than 12 months, the respective shorter periods are examined.

Note that capacity KPI's are only shown for routes launched 2010 or later.

2

Step 2: Suggested Growth

View the visualization of pax development at the Like Markets in order to understand the behavior of this market.

The trend is based on the Like Markets that have been ticked in the checkboxes in step 1.

For details, refer to [Stimulation Methodology Description](#).

A

Mouseover Function: Like Market KPIs

Capacity and pax development for the carrier and the overall market in year 1 compared to year 0.¹⁾ These KPI's can help you quickly understand the stimulation effect and compare Like Markets.

B

Mouseover Function: Pax Breakdown

O&D pax to the Like Market's destination broken down by catchment airport of the source market and by the most relevant carriers (carriers covering 80% of the market). Indicators mark the airports and carriers with the highest absolute pax increase ▲ or decrease ▼. You can use them to identify traffic shifts (cannibalization effects). Pax figures are also shown for year 2, given that data for this period is already available.

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Using the Stimulation & Growth Section: Steps 3 to 5

5 Map Overview

3 Adjust

4 Calculation

5 Growth & Stimulation

3

Step 3: Adjusted Growth

Optional: Adjust the proposed market growth based on your own judgement.

The Like Market chart that you have seen in step 2 may give you hints on how to adjust the growth. For example, if the best matching Like Market is above the trend, this may indicate that you can adjust the expected growth rate up.

4

Step 4: Expected Catchment Market Volume

View the calculation of the expected market volume from your catchment area based on the previous steps.

5

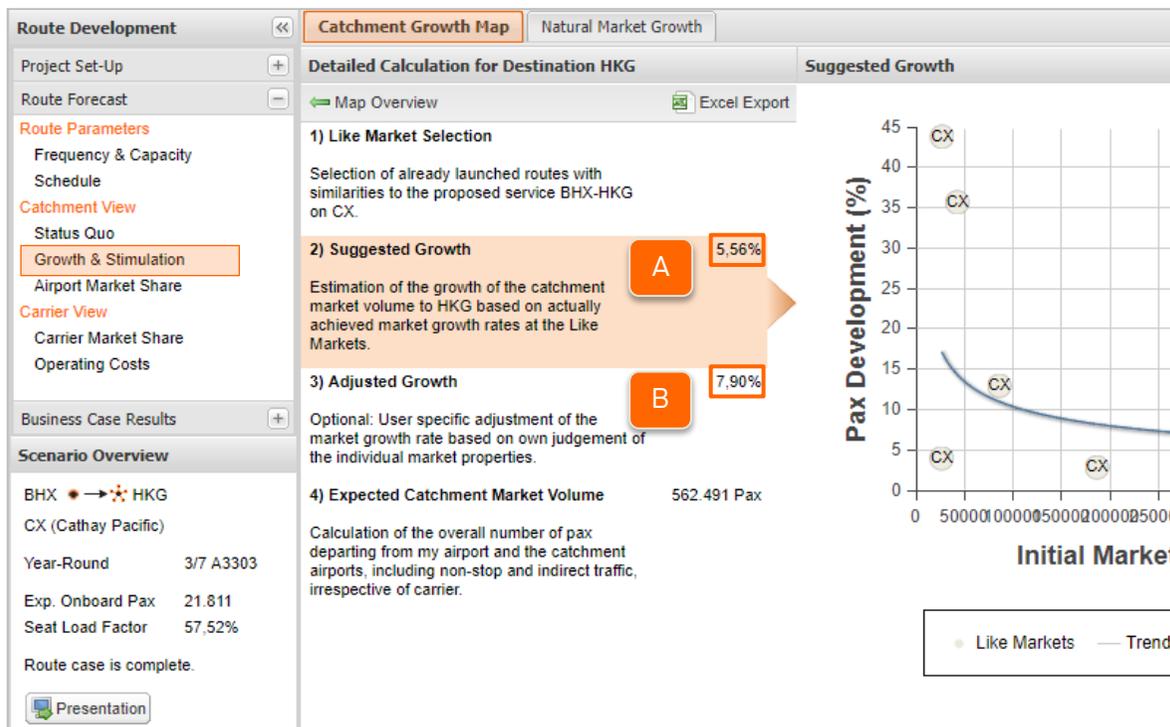
Return to Overview

Press the *Map Overview* button to get back to the map.

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Notes on the Migration of Existing Projects

Due to the methodology improvement, the suggested growth rate may now be different than it has been with the algorithm of previous versions of B Route Development. Your existing forecast results have, however, remained unchanged, as the original growth rate has been kept as the *Adjusted Growth Rate*.



A

Suggested Growth (new algorithm)

The suggested growth rate is based on the new algorithm (even for existing projects!), meaning the new stimulation curves as described in this document are used.

B

Adjusted Growth (as per the creation time of the project)

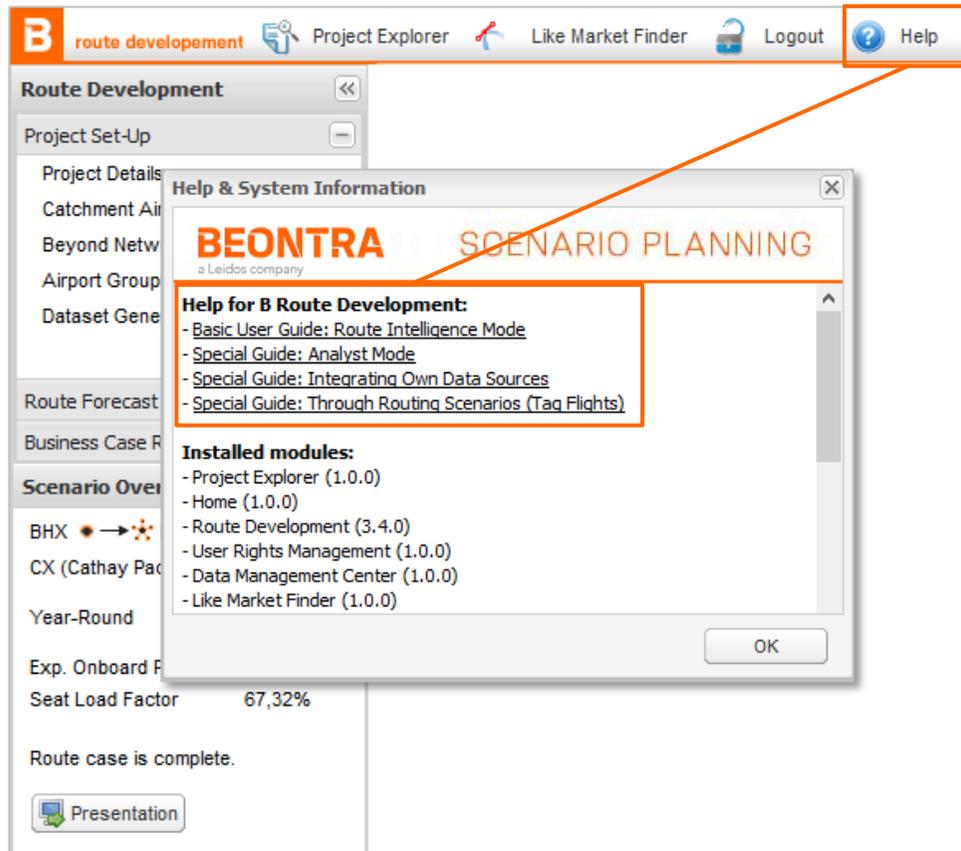
The adjusted growth rate has remained untouched with the update to the new B Route Development version, i. e. it is equal to the suggested growth rate at the time when the project has been created (or your individual value, in case you have overwritten the default).

The adjusted growth rate will be overwritten by the new suggested growth rate if you

- change frequency or capacity of the proposed service
- change the selection of Like Markets
- or recalculate the project.

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Accessing the User Guide



- As with every release, the user guide has been updated to reflect the latest changes and feature additions.
- You can access the latest version of all user guides within B Route Development via the *Help* button.

Contact & Support

Any questions?

Contact our team via broutedevelopment@beontra.com

In case of technical problems

Contact support@beontra.com

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