



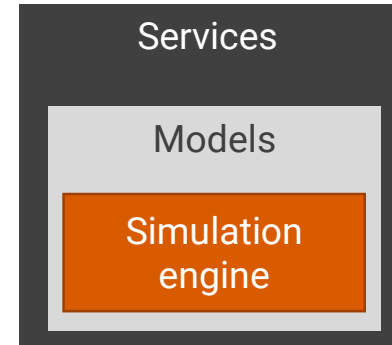
# Planning technology to optimize availability of key personnel

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Project Manager  
Dynamplan  
2 October 2019

**AACO/IATA**  
Technical Forum 2019

# About Dynaplan

- A. Solution provider in the area of planning & simulation incorporated in Norway and Switzerland
- B. Products and services
  - 1. Technology – Dynaplan Smia, our tool for simulation-based scenario analysis
  - 2. Consulting – Assisting customers to set up and run scenario simulation on an ongoing basis
- C. Customer base
  - 1. Major corporations including leading airlines in Europe
- D. Global partnership with Korn Ferry for service delivery



**SAP® Certified**  
Powered by SAP NetWeaver®

**Gartner. 2013**  
**CoolVendor**

WINNER  
PEOPLE ANALYTICS  
— AWARDS 2016 —  
BUSINESS SUPERCHARGER  
by Forrester

 **KORN FERRY™**  
| HayGroup

# Why Dynaplan?

- To help you tackle difficult planning challenges related to your critical workforce.
- We can't know the future. But we can shape it.
- We provide you the management flight simulator for your workforce planning.

# Challenging times require better planning

A challenging business environment...

- Pressure on profit margins
- Growing competition
- Uncertainty in passenger traffic

... requires quick reaction times

A regulated and/or scarce workforce...

- Long training times
- Inflexible development procedures
- Strict recruitment standards

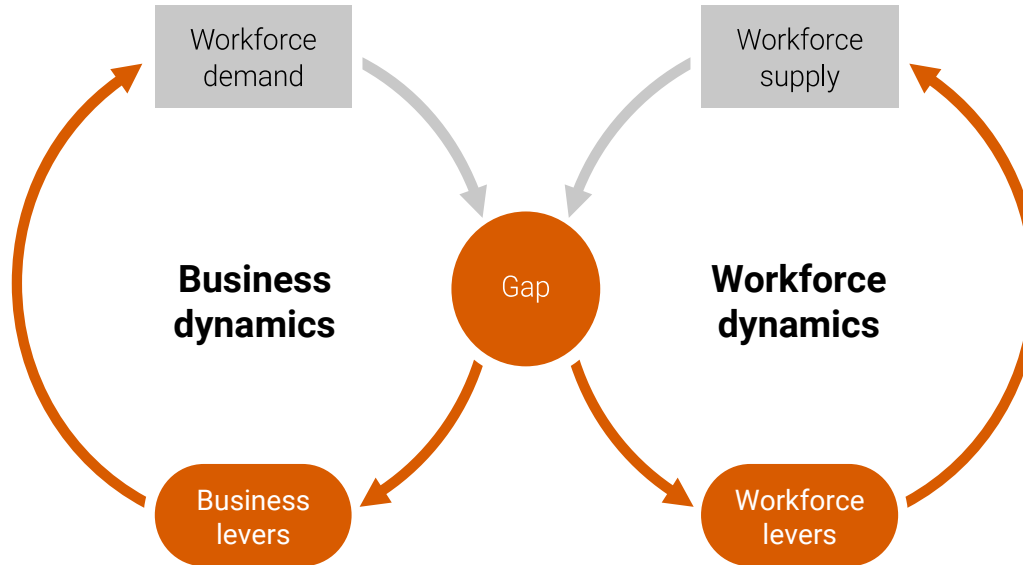
... imposes uncircumventable delays

Reactive personnel policies threaten a smooth operation. A few missing employees can result in costly procedures and damages.

# The workforce planning puzzle

## Demand challenges:

- Fleet growth
- Leasing
- Corporate integration
- Network expansion
- Regulation changes



## Supply challenges:

- Regulated hiring and training processes
- Hiring standards
- Labour market scarcity
- Repatriation of expats

# Master the complexity

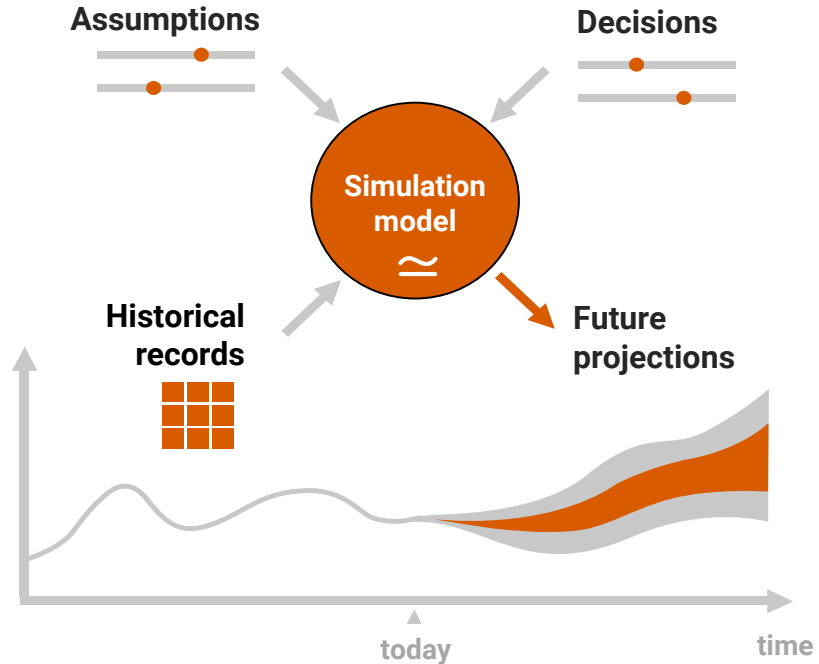


PROFESSOR-EXCEL

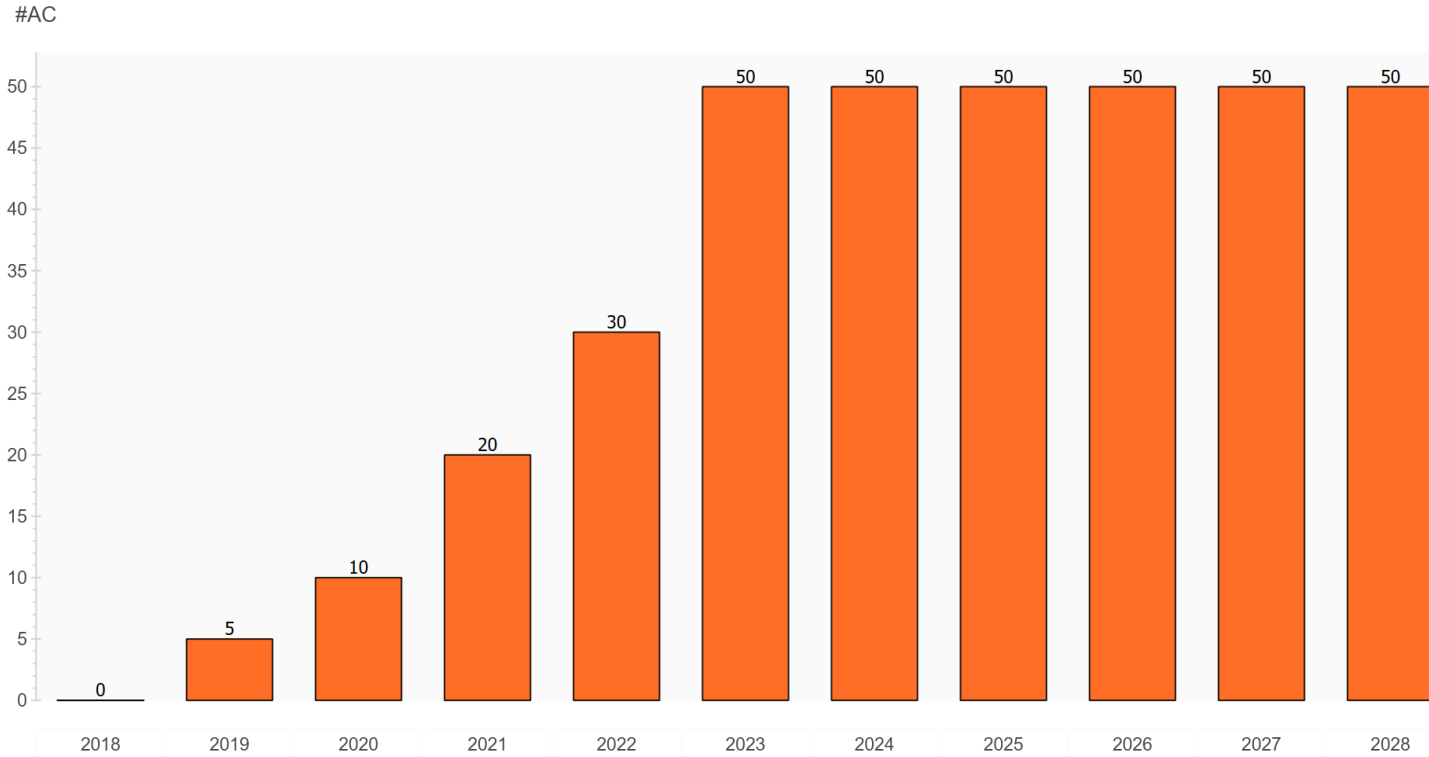
**Mistakes in Excel: The 5 Biggest S...**

# Solving the planning puzzle with scenario simulation

- Our **proprietary simulation technology** allows our customers to explore future scenarios
- Your **management flight simulator** to mitigate workforce risks in operation
- Test policies and understand the impact **before implementation**



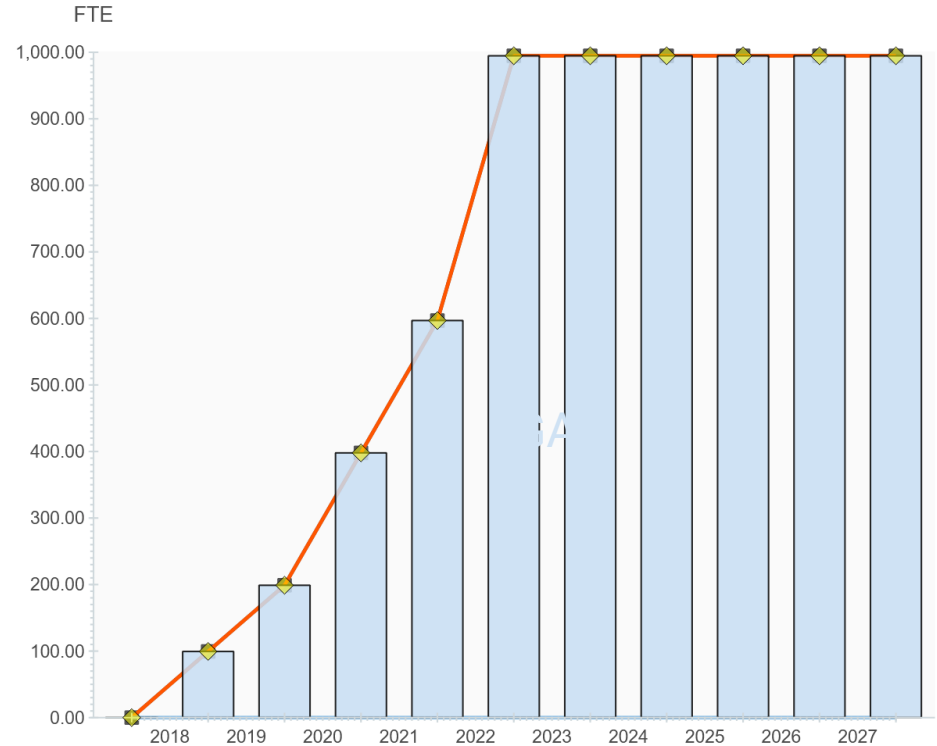
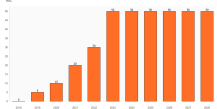
# Example: Sourcing an aggressive fleet growth strategy





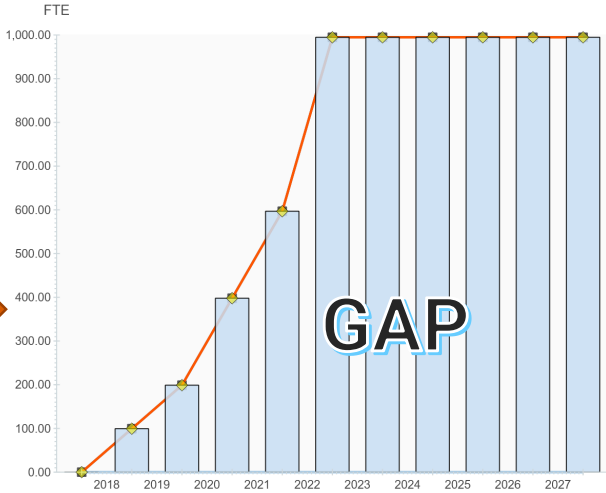
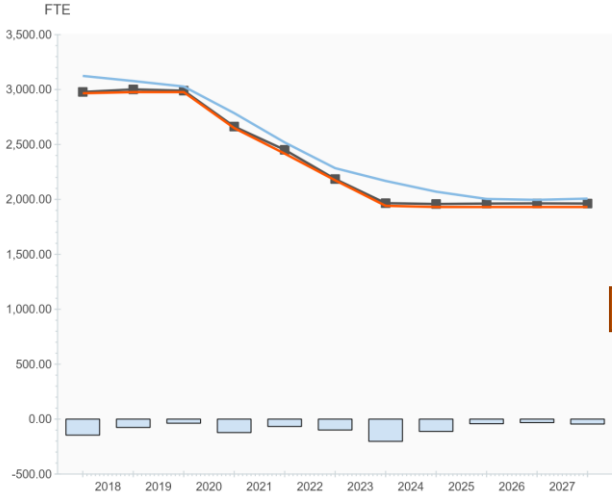
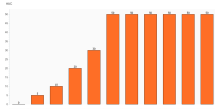
# The challenge: Close the workforce gap

New fleet rollout



# Exploring baseline scenario: Identified potential internal transfers

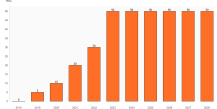
New fleet rollout



# Sourcing assumptions

## Internal transfers scenario

New fleet rollout

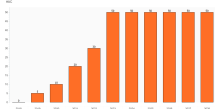


motionspaths high level			JFK	DBX				LHR			AMS				None			
			Wide Body	Narrow Body		Wide Body		Narrow Body		Wide Body		Narrow Body		Wide Body		Narrow Body		Wide Body
			Captain	First officer	Captain	First officer	Captain	First officer	Captain	First officer	Captain	First officer	Captain	First officer	Captain	First officer	Captain	First officer
DBX	Narrow Body	Captain	X				X				X				X			
	Wide Body	First officer			X			X				X						
		Captain																
LHR	Narrow Body	First officer				X			X				X					
		Captain	X				X				X				X			
	Wide Body	First officer			X			X				X						
		Captain																
AMS	Narrow Body	First officer				X			X				X					
		Captain	X				X			X				X				
	Wide Body	First officer			X			X				X						
		Captain																
None	Narrow Body	First officer																
		Captain																

# Sourcing assumptions

## Define training efforts

New fleet rollout



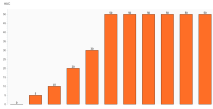
Internal transfers



	Input.Capacities bound FO Trainee non productive	Input.Capacities bound CPT Trainee non productive	Input.Capacities bound FO instructor non productive	Input.Capacities bound CPT instructor non productive
<i>Ready Entry nach FO Narrow Body/Wide Body_non-rated</i>	0.28 FTE/event	0.00 FTE/event	0.02 FTE/event	0.05 FTE/event
<i>Ready Entry nach CPT Narrow Body/Wide Body_non-rated</i>	0.00 FTE/event	0.28 FTE/event	0.00 FTE/event	0.06 FTE/event
<i>Ready Entry nach FO Narrow Body/Wide Body_rated</i>	0.13 FTE/event	0.00 FTE/event	0.007 FTE/event	0.02 FTE/event
<i>Ready Entry nach CPT Narrow Body/Wide Body_rated</i>	0.00 FTE/event	0.13 FTE/event	0.00 FTE/event	0.03 FTE/event
<i>FO Narrow Body nach FO Narrow Body_</i>	0.28 FTE/event	0.00 FTE/event	0.02 FTE/event	0.05 FTE/event
<i>FO Wide Body nach FO Wide Body_</i>	0.33 FTE/event	0.00 FTE/event	0.02 FTE/event	0.05 FTE/event
<i>CPT Narrow Body nach CPT Narrow Body_</i>	0.00 FTE/event	0.28 FTE/event	0.00 FTE/event	0.06 FTE/event
<i>CPT Wide Body nach CPT Wide Body_</i>	0.00 FTE/event	0.33 FTE/event	0.00 FTE/event	0.07 FTE/event
<i>CPT Wide Body nach CPT Narrow Body_</i>	0.00 FTE/event	0.21 FTE/event	0.00 FTE/event	0.04 FTE/event

# Other workforce assumptions: Retirement, leaving, ...

New fleet rollout



Internal transfers



Training effort

From Category	To Category	1999	2000
Head Entry with FT Name Bookable Bkg, no med	0.23 FT/week	0.28 FT/week	
Head Entry with FT Name Bookable Bkg, no med	0.20 FT/week	0.26 FT/week	
Head Entry with FT Name Bookable Bkg, med	0.11 FT/week	0.10 FT/week	
Head Entry with FT Name Bookable Bkg, med	0.11 FT/week	0.11 FT/week	
FT Name Book with FT Name Bkg,	0.23 FT/week	0.28 FT/week	
FT Name Book with FT Name Bkg,	0.23 FT/week	0.28 FT/week	
FT Name Book with FT Name Bkg,	0.20 FT/week	0.26 FT/week	
FT Name Book with FT Name Bkg,	0.20 FT/week	0.26 FT/week	
FT Name Book with FT Name Bkg,	0.11 FT/week	0.10 FT/week	

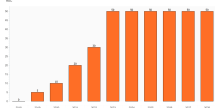
## Outflows

Retirements

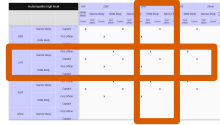
Normal leavers

# Simulate

New fleet rollout



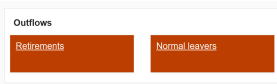
Internal transfers



Training effort

Activity	1999 Calendar	1999 Calendar
Head City each CF Service Support (Bdy, Serv) 1	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 2	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 3	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 4	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 5	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 6	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 7	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 8	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 9	0.23 FTEweek	0.23 FTEweek
Head City each CF Service Support (Bdy, Serv) 10	0.23 FTEweek	0.23 FTEweek

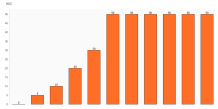
Workforce drivers



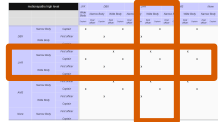
The screenshot shows the DYNAPLAN simulation software interface. On the left is a navigation menu with options: Home, Structure, Initialisation, Assumptions, and Analysis. The main area contains several charts: 'Demand vs. supply' (empty), 'Diversity and tenure' (histogram), 'In- and outflows' (bar chart), 'Motion paths' (empty), 'Trainings' (bar chart), and 'Fleet development' (bar chart). A 'Selected AOC' dropdown menu on the right lists JFK, DBX, LHR, and AMS. The bottom left corner features the logo 'Powered by DYNAPLAN®'.

# Identify impact of your assumptions: Is the gap closed?

**New fleet rollout**



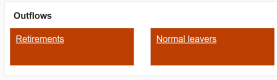
**Internal transfers**



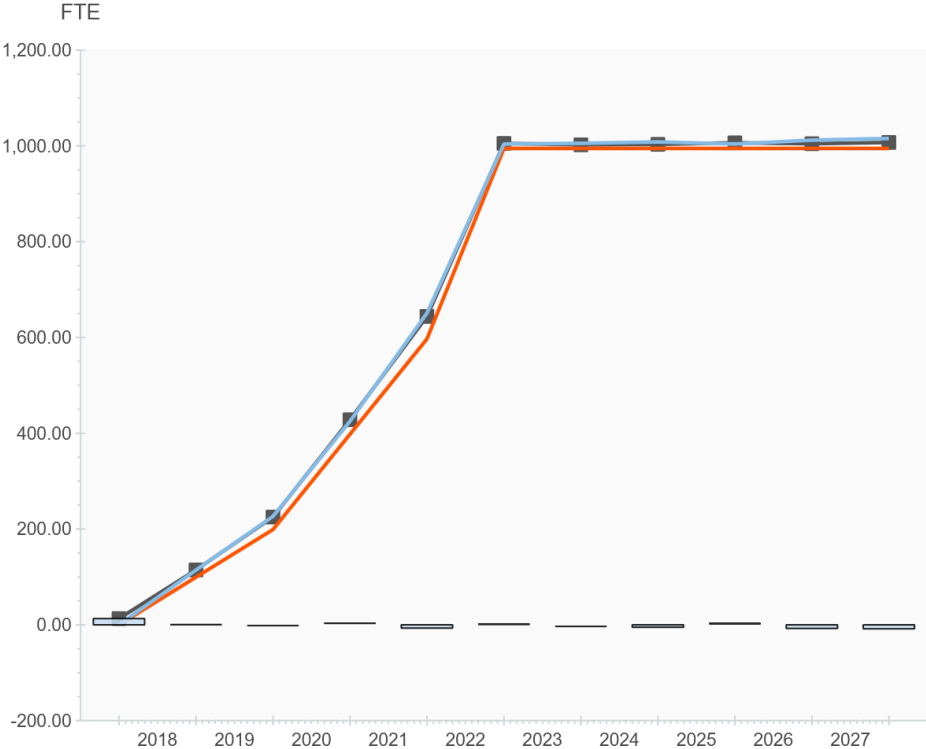
**Training effort**

Activity	FTE	Cost
Head City task CO Service Acquisition Bldg, no travel	0.23 FTEweek	0.20 FTEweek
Head City task CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.28 FTEweek
Head City task CO Service Acquisition Bldg, travel	0.11 FTEweek	0.80 FTEweek
Head City task CO Service Acquisition Bldg, travel	0.20 FTEweek	0.10 FTEweek
CO Service Acquisition Bldg, no travel	0.23 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.23 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.23 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.20 FTEweek
CO Service Acquisition Bldg, no travel	0.20 FTEweek	0.20 FTEweek

**Workforce drivers**

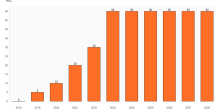


**Analyze**

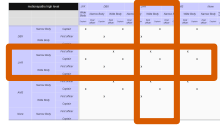


# Identify impact of your assumptions: How does the new workforce look like?

New fleet rollout



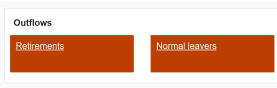
Internal transfers



Training effort



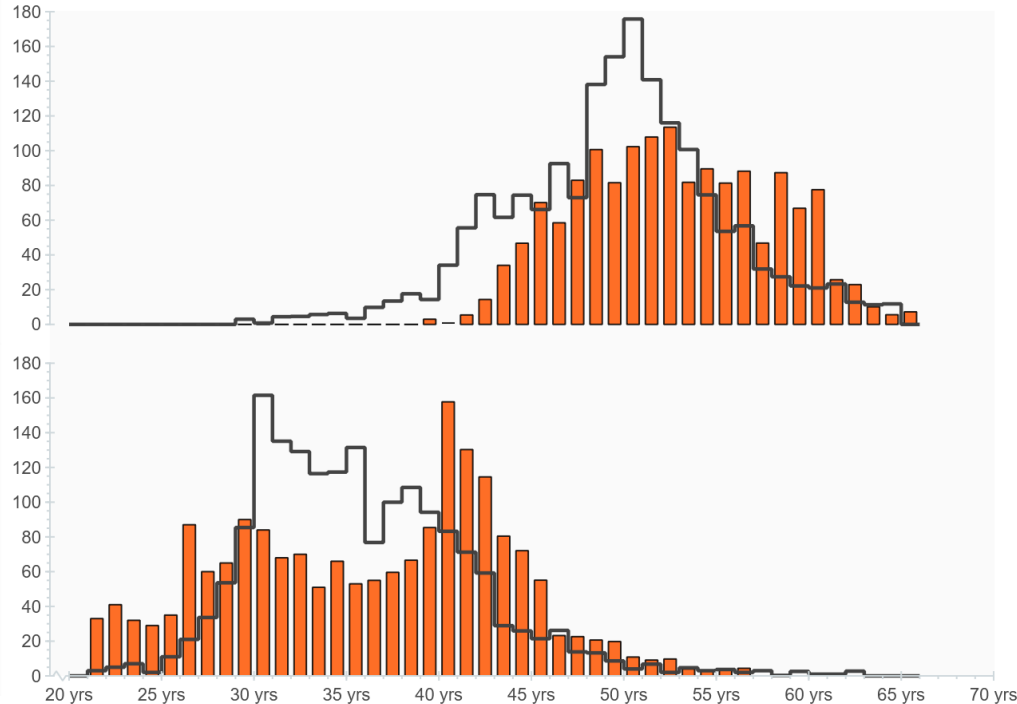
Workforce drivers



Analyze



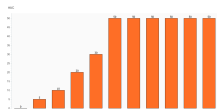
Cluster #FTE



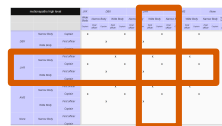


# Analyze transfers required

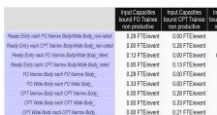
New fleet rollout



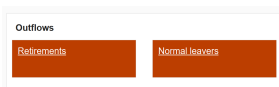
Internal transfers



Training effort



Workforce drivers



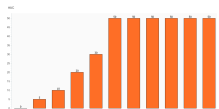
Implement



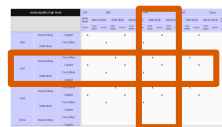
FILES moved:				JFK		DBX		LHR		AMS		
time	Jan 1, 2018	sum toAC	all	First officer	Captain	First officer	Captain	First officer	Captain	First officer	Captain	
DBX		Narrow Body	A320									
			B737									
			B757									
		Wide Body	A380									
			A310									
			B767									
			B747-8									
LHR	First officer	Narrow Body	A319	5		11		8		28		
			A320	0		1		2		14		
			B737	3		12		6		16		
		Wide Body	B757	0		4		1		6		
			A380						6			
			A310									
	Captain	Narrow Body	B767						11			
			B747-8							4		
			A319		0		0		21		39	
		Wide Body	A320		0		0		0		2	
			B737		0		0		5		9	
			B757		0		0		0		0.7	
			A380									
			A310									
			B767									
			B747-8									

# Identify training pipeline

New fleet rollout



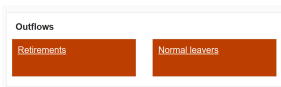
Internal transfers



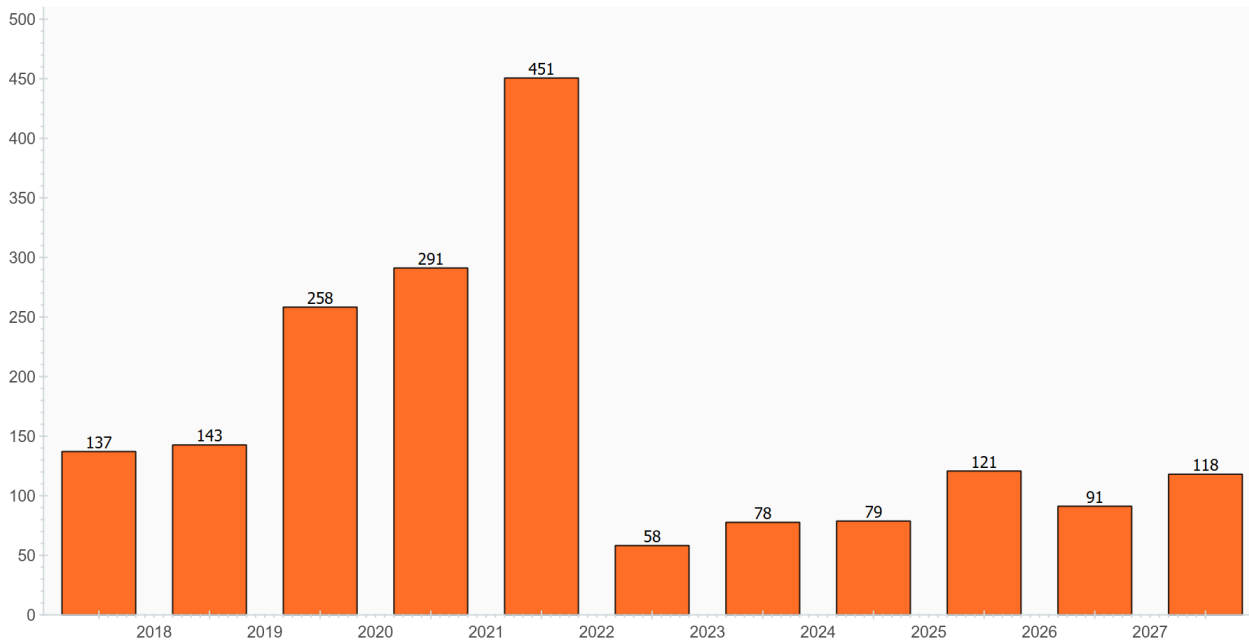
Training effort

From Category	To Category	Count
Head City back FT Home Supportive Bldg, unrolled	0.28 FTEweek	0.28 FTEweek
Head City back FT Home Supportive Bldg, unrolled	0.50 FTEweek	0.28 FTEweek
Head City back FT Home Supportive Bldg, unrolled	0.11 FTEweek	0.50 FTEweek
Head City back FT Home Supportive Bldg, unrolled	0.50 FTEweek	0.11 FTEweek
FT Home Back back FT Home Bldg,	0.28 FTEweek	0.28 FTEweek
FT Home Back back FT Home Bldg,	0.28 FTEweek	0.28 FTEweek
FT Home Back back FT Home Bldg,	0.28 FTEweek	0.28 FTEweek
FT Home Back back FT Home Bldg,	0.50 FTEweek	0.28 FTEweek
FT Home Back back FT Home Bldg,	0.50 FTEweek	0.28 FTEweek
FT Home Back back FT Home Bldg,	0.50 FTEweek	0.28 FTEweek

Workforce drivers



Implement



# Benefits

1. Accelerate agility of the organization by **holistic & dynamic** planning models to master complexity
2. **Fast** scenario simulation towards risk assessment and robust strategy
3. Strategy execution - **Concrete measures** for creating operational impact
4. Align & engage stakeholders  
-> «**board room** ready»



# Our customers

## Lufthansa Group

“ Strategic Workforce Planning with Dynaplan is a key component of our modern HR Management. The solution runs close to the business to get a positive customer experience. ”



**Claus Wachenheim**  
Vice President Artificial Intelligence,  
Robotics, People Analytics, HR  
Lufthansa Group



# Customer case



## Lufthansa

### SITUATION

Lufthansa group was undergoing significant changes due to **internal optimisation efforts**. This needed that management levels and skill be adapted to the program needs. Core strategic questions:

1. How to handle capacity risks caused by the **transformation**.
2. What are and how to mitigate demographic risks?
3. How could talent pools be steered to bring the right setup of quantity, quality, timing?

Our team was engaged to assist LH Group in effectively implementing a manpower planning program to...

- 1 Derive **future recruiting needs across hiring channels** and adjusting the sourcing strategy accordingly
- 2 Analyze future supply and demand of key management positions as well as (complex) **career paths** and talent pools optimized to fill the gap (time horizon 10-15 years)
- 3 Analyze impact of **fleet development and airport terminal restructuring on ground operations** (check-in, ticketing, etc.)
- 4 Analyze demographic risks in terms of workability issues in jobs with high degree of physical activities
- 5 Analyse sales transformation impact on sales staff, including multi channel approach
- 6 Adjust automation project timelines to demographic development
- 7 Adjust outsourcing timeframe to demographic development

# Thank you



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