



Airport Parking

How to maximize customer experience and value creation from airport parking activities

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Authors:



François-Joseph Van Audenhove

Partner, Travel & Transportation,
Belgium
vanaudenhove.f@adlittle.com



Aurelia Betatti

Partner, Global Practice Head Strategy
& Organization, France
bettati.aurelia@adlittle.com

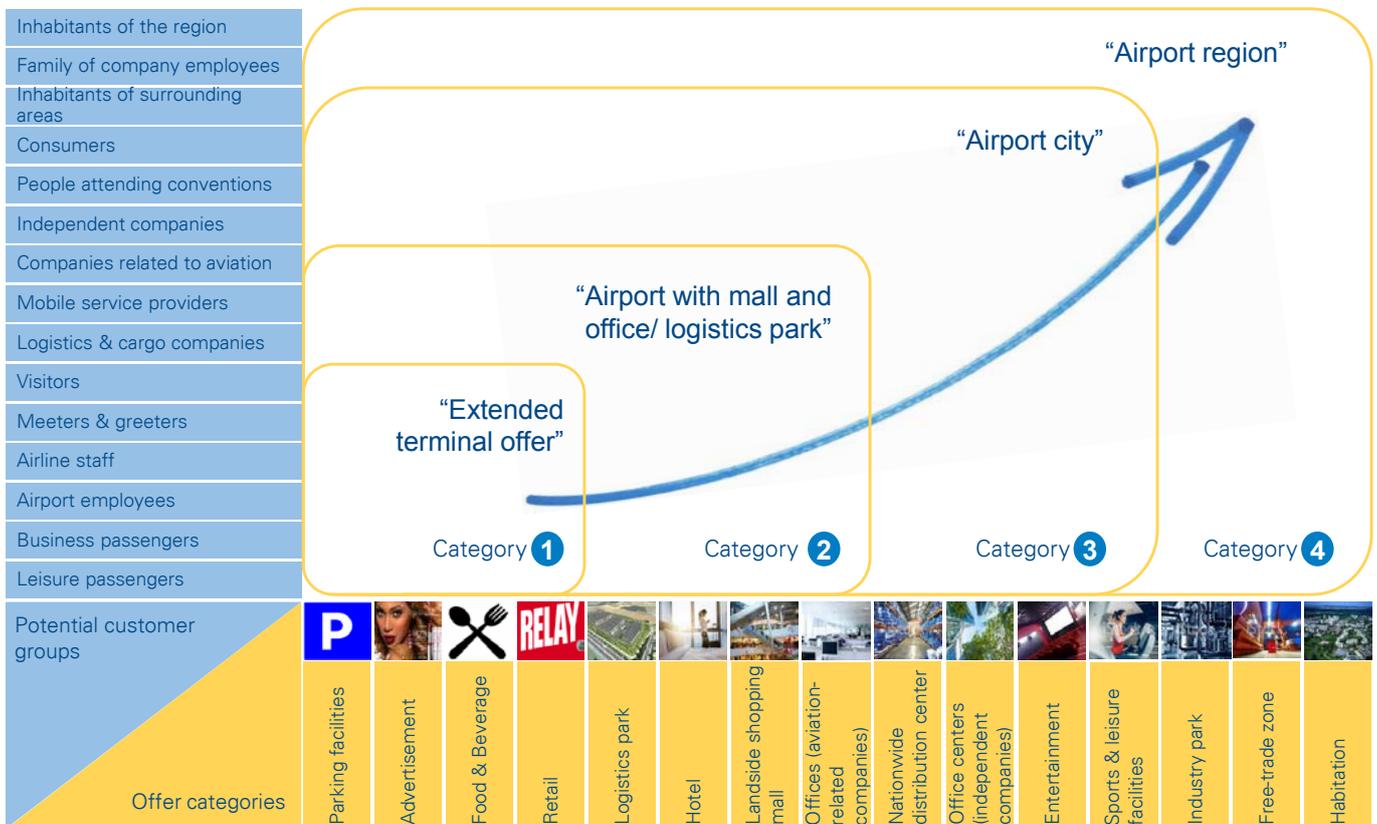
Setting the scene

Over the past few decades airports have evolved from mere infrastructure providers to hubs of commercial activities. The continuous growth in passenger traffic and coverage of destinations, coming from the hub strategy of legacy airlines as well as from the rise of low-cost airlines, has transformed the airport landscape. Airports now compete for passengers with multiple other airports in the same catchment area. They have realized that commercial success will come from offering a broad portfolio of destinations, airlines and supporting services and by focusing on customer experience in all aspects. Many airports have therefore extended their service offerings, focusing increasingly on providing a holistic customer experience with the passenger central to both strategic and commercial decisions (Figure 1).

Proper management of airport parking activities has a defining impact on the customer experience, as the parking premises form the first physical point of contact at the airport for point-to-point passengers. Real-time information screens, cleanliness and a consistent look and feel to the pathway to the terminal will contribute to a feeling of safety for the passenger, as well as allow for a carefree start to his trip.

Moreover, airport parking activities represent one of the more important shares in the commercial revenue streams of airports. Typically, revenues from airport parking represent between 5% and 15% of total airport revenue and up to 30% of non-aeronautical revenues, depending on the size of the airport, the proximity to the city center and the availability of public transport alternatives. At the same time, given the relatively low capital

Figure 1: Extension of airport business model



Source: Arthur D. Little

and operational expenditures, airport parking activities typically generate significant operational margins and cash flow.

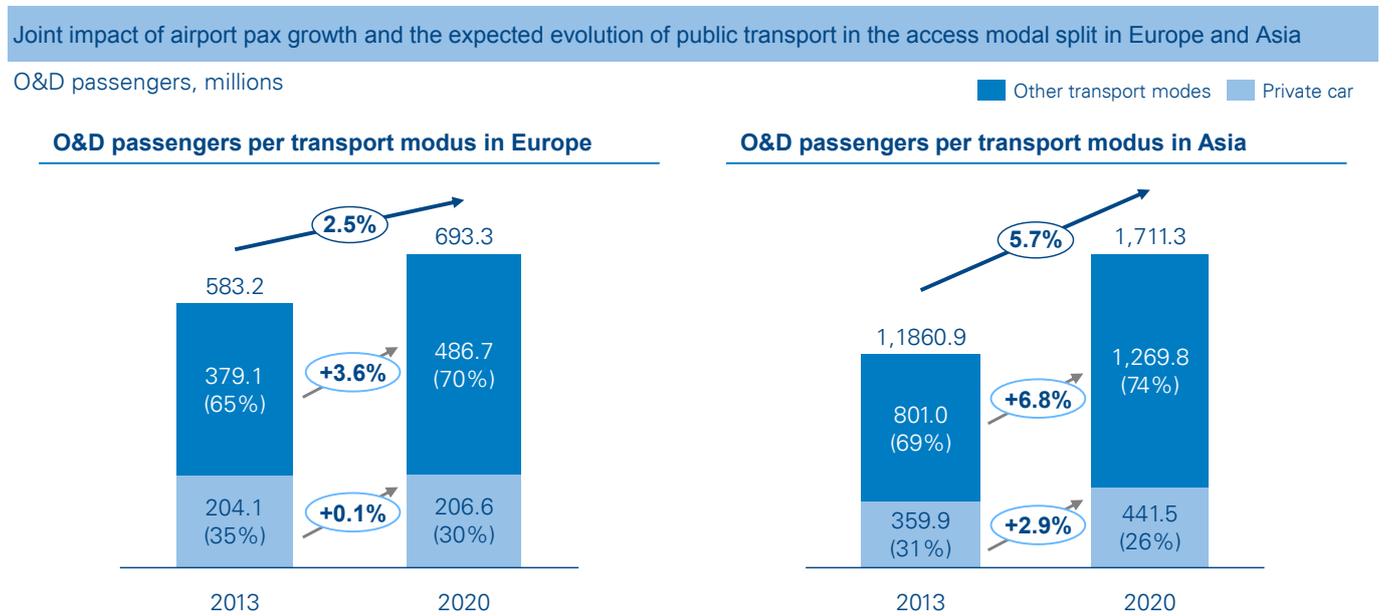
Many airports have witnessed continuous growth of parking activities, despite development of public transport alternatives. These alternatives are often supported by national and local mobility policies that have been adopted to shift the access modal split of airport passengers towards public transport. However, absolute growth in airport passenger traffic often offsets the impact of these policies. (See Figure 2.) Moreover, parking management practices such as yield management, flexible capacity and restricted access to the curbside at the

terminal result in increased parking activity in terms of both volume and revenue.

In this context, airports need to address two strategic imperatives in order to maximize value creation from airport parking:

1. Anticipate changes in demand and customer behavior to match future demand for parking with available capacity in the short, medium and long term
2. Design attractive parking products to drive superior customer experience while maximizing value created from parking activities

Figure 2: Correlation of parking sales, modal split evolution and O&D pax growth



NOTE: Current and forecasted access modal split is calculated for a relevant selection of 26 European cities and 26 Asian cities under a "PTx2 scenario" implying a doubling of the worldwide public transport modal share in 2025 compared to 2005
 Source: Arthur D. Little analysis, IATA, World Bank

1. Strategic planning to anticipate demand and change in customer behavior

Anticipating growth of parking demand is important when making strategic decisions on parking infrastructure developments, which are long term by nature. When doing so, the ability to forecast evolution of customer profiles over time is critical. Customer profiles can be segmented, as in Figure 3, based on their trip details (i.e. purpose and length), price sensitivity and need for additional services (e.g. valet parking, carwash services, insurance). Customer behavior within a specific segment may evolve over time and lead to diverging demand for different parking offerings.

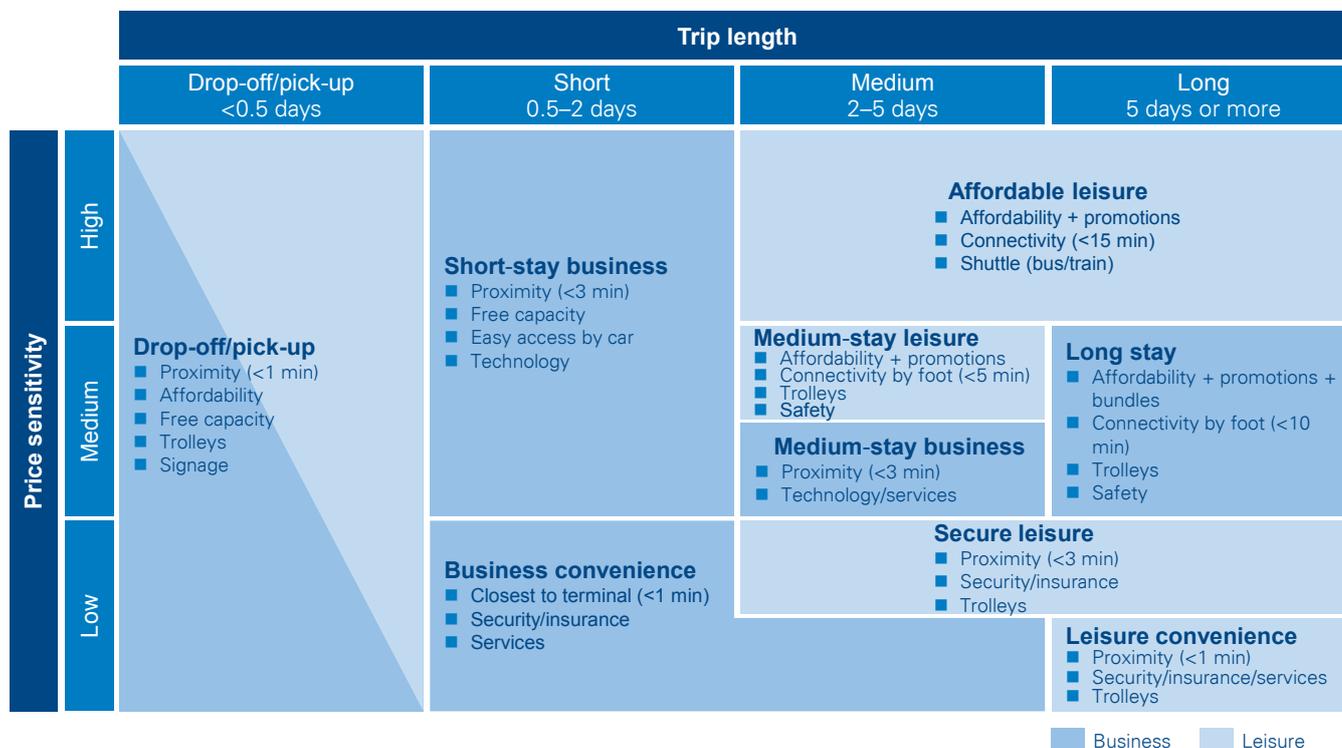
Airport parking activities are by nature cyclical, causing highs and lows in demand throughout the year. This volatile demand pattern is mainly related to the purpose of the airport passenger's trip (i.e. business versus leisure). Often the lows in one segment level out the peaks in the other segment, resulting in a rather flat demand profile. Occasionally, however, peaks in both segments might overlap, coinciding with national holidays

and special events in both the home country and in the most popular destination countries.

The combination of growth for parking demand, cyclical demand and changes in customer behavior at segment level requires careful demand forecasting and capacity planning in order to match capacity with future demand in a timely fashion while optimizing capital and operational expenditures. This has proven to be a challenging exercise for airports and parking operators, for the following reasons:

- Forecasts of future parking visitors are based on the historical evolution without making a distinction between different segments, due to lack of insight into the behavior and requirements per segment (e.g. preferred offering per segment)
- The impact of external trends on car usage is sometimes difficult to estimate (e.g. impact of economic cycle,

Figure 3: Segmentation of airport parking visitors



development of public transport alternatives, development of access road infrastructure, impact of public mobility policies)

- Narrow understanding of the cyclicity of parking demand throughout the year and peak demand calculations (e.g. evolution of average length of stay per parking product throughout the year)

Due to this inability to precisely estimate the future parking demand and required capacity, many airport and parking operators heavily rely on temporary capacity solutions (e.g. capacity extensions to parking facilities, flexible capacity management and changing staff parking into pax parking).

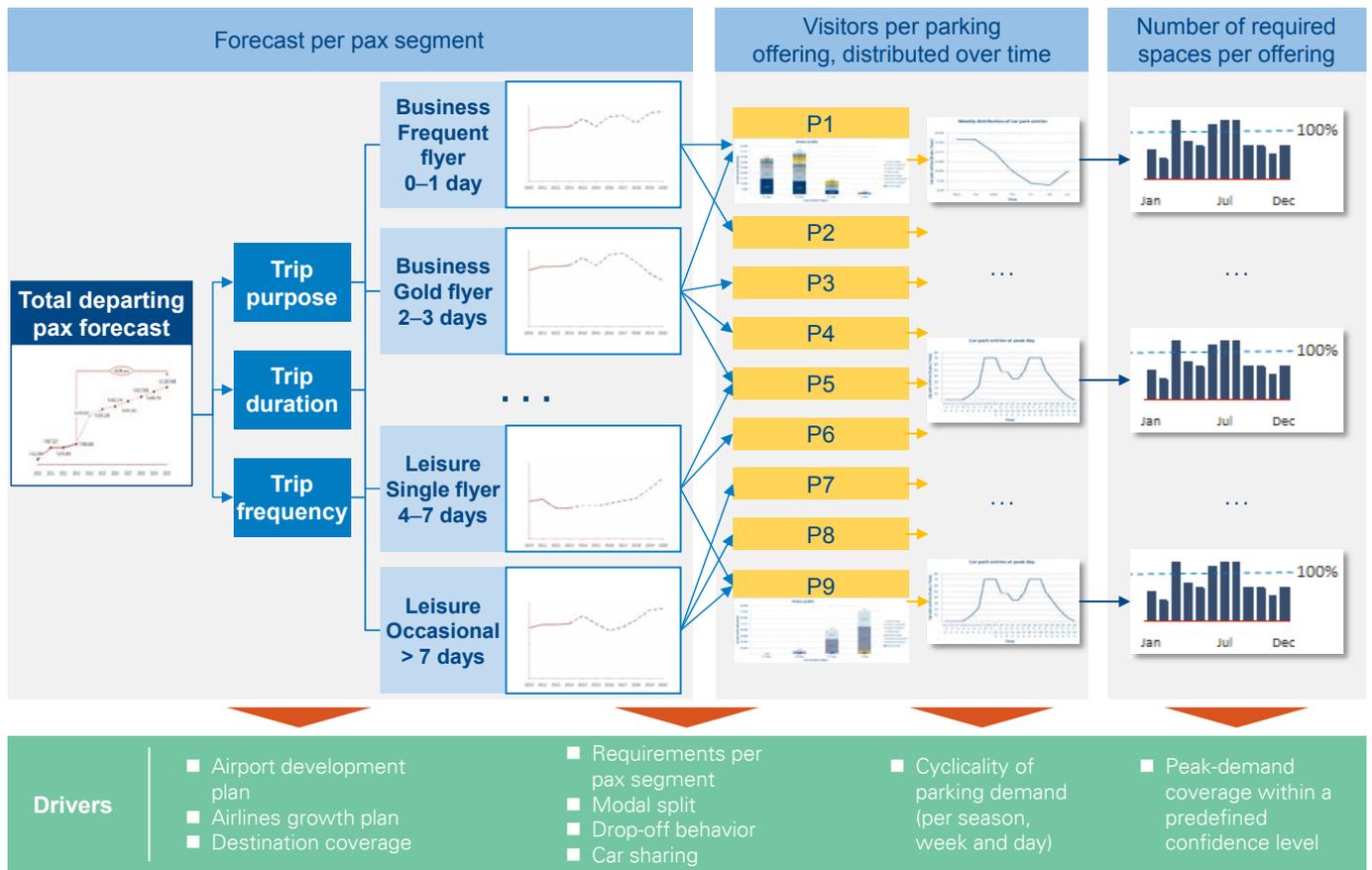
To precisely model the evolution of visitors per parking offering and the resulting impact in terms of required capacity, it is

important to start from the forecasted evolution of the different pax segments (i.e. total number of airport visitors), as they form the underlying driver of demand for parking (Figure 4). The evolution of these pax segments can then be translated into evolution of visitors per parking offering, based on the expected behavior and parking requirements for each pax segment. Cyclicity of demand and the required coverage of peak demand throughout the year further define the required number of parking spaces per offering.

Capacity solutions will typically differ depending on the considered time horizon, due to the long cycle of parking infrastructure developments:

- Short-term solutions (current year):

Figure 4: Airport parking strategic forecasting model



- Flexible capacity management technologies (including routing inside parking facilities)
- Commercial actions (e.g. encourage customers to reserve upfront, promote use of remote parking facilities)
- Changes to airport procedures (e.g. check-in, boarding, landing, border control, baggage handling)
- Medium-term solutions (one to three years):
 - Allocation of parking capacity to different visitor segments (e.g. switching airport staff parking to airport passenger parking)
 - Infrastructure improvements and extensions to create buffer capacity (e.g. flat parking facilities)
- Long-term solutions (three to 10 years and beyond):
 - Airport infrastructure development plan (e.g. master plan for the development of major parking infrastructure, access roads, terminals, commercial real estate)
 - Mobility plan (including public transport infrastructure)

2. Attractive offering to drive customer experience and maximize value creation

The commercial offering of the airport parking activity is a decisive factor to the overall satisfaction of a parking visitor, and disruptive changes in customer mobility needs in past years required parking operators to adapt their product and service offerings accordingly.

According to Arthur D. Little’s Airport Parking Benchmarking study conducted in 2014, best-performing airports have improved their product and service offerings along five key dimensions (Figure 5):

1. Parking offering

The airport parking offering needs to cater to every parking visitor segment and those visitors’ specific needs (as defined in Figure 3). The diverse needs of every segment require a mix of different parking products, some of which will serve the greater part of parking visitors while others

remain niche offerings. These different types of parking products will ask for different customer approaches as well as different operational models. At the same time the offering needs to remain simple and transparent in order to ensure readability upon arrival at the airport. A best practice is to have a limited number of parking products covering the needs of each individual segment, while avoiding complexity. To that effect, a good practice is to break the link between parking offers and physical parking locations, as this allows the airport to assure offer availability and adapt capacity in a more flexible way. Finally, many airports offer parking visitors the option to reserve upfront, which gives them the certainty of having a parking space at a specified price upon arrival at the airport.

Figure 5: Dimensions of Airport parking commercial offering



2. Pricing

The pricing scheme should be based on a comparison with the prices of city center parking facilities, taxi prices and prices of competitors' parking facilities around the airport, as passengers choose between these alternatives to travel to the airport. When choosing his preferred parking product, each parking visitor makes an implicit trade-off between price and proximity to the airport terminal, which makes the pricing scheme a critical factor in the commercial success of airport parking. Moreover, it is important to have a consistent pricing scheme with a substantiated price difference between premium, standard and remote parking facilities. Finally, pricing mechanisms can be used to maximize capacity utilization, and offering discounts for early reservation can boost overall parking revenues. In combination with a yield management system, this allows increases in revenues by 6% to 8% yearly, while optimizing capacity utilization.

3. Capacity management

Periods of capacity shortage and unavailability of specific parking offerings will have a tremendous impact on the customer experience. In order to address this, it is important to introduce flexible capacity through the use of innovative capacity management technologies to allow for allocation of the same parking facilities to different parking offers. A few of the best-performing airports use capacity management technologies to deal with capacity constraints in peak seasons, such as automated parking by robots, bumper-to-bumper parking, valet parking and parking space indicator systems in their parking facilities.

4. Customer experience

The end-to-end customer experience regarding the airport parking activity is a key success factor being built at every step of the journey, from preparation at home, through travel to and arrival at the airport, to usage of the parking facilities and the pathway from the parking facilities to the airport terminal. When preparing for their trips, it is important that parking visitors can find reliable information and reserve parking spaces online. A customer-friendly web site plays an important role here. Later, when visitors are driving to the airport, providing real-time availability of the parking facilities and providing the best route to the airport (via a mobile app) will contribute to a carefree experience. Upon arrival at the airport, good visibility and clarity of signage are crucial, and a pleasant atmosphere within the parking facilities will drive superior experience. As the airport experience starts in the parking facilities, best practice is to ensure that the atmosphere in the parking facilities is consistent with that of the rest of the airport.

5. Stakeholder management

Airport parking activities should not be treated as a stand-alone activity, and potential for collaboration with other airport stakeholders at system level (e.g. airlines, retail, food & beverage) should not remain untapped. Best-performing airports are strongly investing in cross-marketing initiatives such as loyalty cards, parking promotions bundled with food & beverage promotions, and advertisements in the parking facilities and near payment terminals. If carefully selected, taking into account the required investments and assessing their operational feasibility, such actions can increase parking revenue while contributing to customer satisfaction.

Key insight for the executive

Airport parking activities are an important contributor to the commercial revenue streams of airports. Airports must therefore offer attractive portfolios of parking products at the right prices to contribute to the overall experience of the airport passenger.

However, many airports lack clear strategies and do not perform regular reviews of their parking activities to match current parking capacity and offerings with future growth in passenger traffic and changes in customer needs and behavior. This jeopardizes customer satisfaction and undermines value that could be created from the parking activities.

In order to successfully review airport parking activities, two strategic imperatives need to be considered:

1. Anticipate changes in demand and customer behavior and match future demand for parking with available capacity in the short, medium and long term. Structured capacity planning helps to translate the forecasted evolution of the different pax segments visiting the airport into the required number of parking spaces per offering. This exercise needs to take into account the expected customer behavior, the cyclical nature of demand and the impact of external trends (e.g. economic cycle, mobility policies). The outcome of this exercise is a set of practical solutions in the short, medium and long term to match parking capacity per parking product with the expected parking demand.
2. Design attractive parking products to drive superior customer experience while maximizing value created from parking activities. Best-performing airports have improved their product and service offerings along five key dimensions:
 - **Parking offering:** does the offering cater to all segments and their needs while remaining simple and transparent?
 - **Pricing:** is a consistent pricing scheme in place for every parking product, and does it support capacity utilization?
 - **Capacity management:** is volatility in demand effectively managed?
 - **Customer experience:** is sufficient attention given to the customer experience at every step of the journey?
 - **Stakeholder management:** is there unlocked commercial potential in collaborating with other airport stakeholders such as airlines, retail and food & beverage?

This diagnosis will form the basis on which a comprehensive improvement program can be developed. By doing so airports can improve the overall attractiveness of their parking offerings and reach a superior customer experience, while maximizing value creation from airport activities.

Contacts

If you would like more information or to arrange an informal discussion on the issues raised here and how they affect your business, please contact:

Argentina

Micaela Carlino
carlino.micaela@adlittle.com

India

Srini Srinivasan
srinivasan.srini@adlittle.com

Spain

Salman Ali
ali.salman@adlittle.com

Austria

Karim Taga
taga.karim@adlittle.com

Italy

Saverio Caldani
caldani.saverio@adlittle.com

Sweden / Russia

Klas Anderlind
anderlind.klas@adlittle.com

Belgium / Luxemburg

Francois-Joseph Van Audenhove
vanaudenhove.f@adlittle.com

Japan / Singapore

Akitake Fujita
fujita.akitake@adlittle.com

Switzerland

Ralf Baron
baron.ralf@adlittle.com

Brazil

Rodolfo Guzman
guzman.r@adlittle.com

Korea

Kevin Lee
lee.kevin@adlittle.com

Turkey

Coskun Baban
baban.coskun@adlittle.com

China

Antoine Doyon
doyon.antoine@adlittle.com

Lebanon / Levant region

Albert Kostanian
kostanian.albert@adlittle.com

UK

Russell Pell
pell.russell@adlittle.com

Czech Republic

Dean Brabec
brabec.dean@adlittle.com

Middle East

Thomas Kuruvilla
kuruvilla.thomas@adlittle.com

USA

John Brennan
brennan.john@adlittle.com

France

Aurelia Bettati
bettati.aurelia@adlittle.com

Norway

Diego MacKee
macKee.diego@adlittle.com

Germany

Ralf Baron
baron.ralf@adlittle.com

The Netherlands

Martijn Eikelenboom
eikelenboom.martijn@adlittle.com



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