



DC Advisory discusses:

Intelligent mobility – the future of public transport

A study by DC Advisory in cooperation with Civity Management Consultants

Introduction & major trends in public transportation

Introduction

The market for public transportation is undergoing a substantial transformation. While overall trends such as population growth and urbanisation are driving general demand for the sector, digitisation and multimodality are affecting business models and providing additional opportunities for growth.

While well-established traditional market participants have to adapt to the changing market requirements and new fields of application, highly specialised and innovative companies are entering the market and instantly gaining share in their niches. Key factors for being successful under the amended circumstances include speed, a high degree of innovation, flexibility, and a growing capability of being able to offer complete system solutions.

In recent years, the market potential and changing requirements have led to an increase in M&A activity across the sector on all levels, including OEMs, suppliers and operators. From 2016 to 2018, we have recorded 123 sector related transactions in German-speaking Europe. We expect that this trend will continue and even intensify in the future. This also holds true for the rest of Europe which presents many opportunities for sector operators and investors.

Major trends in public transportation

POPULATION GROWTH & URBANISATION

- Population growth and ongoing urbanisation drive the expansion of public transportation infrastructure and lead to increased capacity requirements of urban transit systems
- Efficient transportation increasingly relies on the intelligent use of infrastructure and real-time, demand-dependent adjustments

MULTIMODALITY

- A combination of multiple transportation methods, such as train, bus as well as car- and bike-sharing, in order to optimise urban traffic
- Intelligent and predictive management of people flows and synchronisation of transportation methods to minimise congestion

PERSONALISATION

- Customer-oriented service offering, including entertainment and individualised traffic information to maximise user experience
- Significant additional business potential based on gathering and utilising passenger data

DIGITISATION

- Harmonisation of protocols enabling the communication among components and systems on various control levels (ITCS / TCMS)
- Convergence and integration of hard- and software on a component and system level

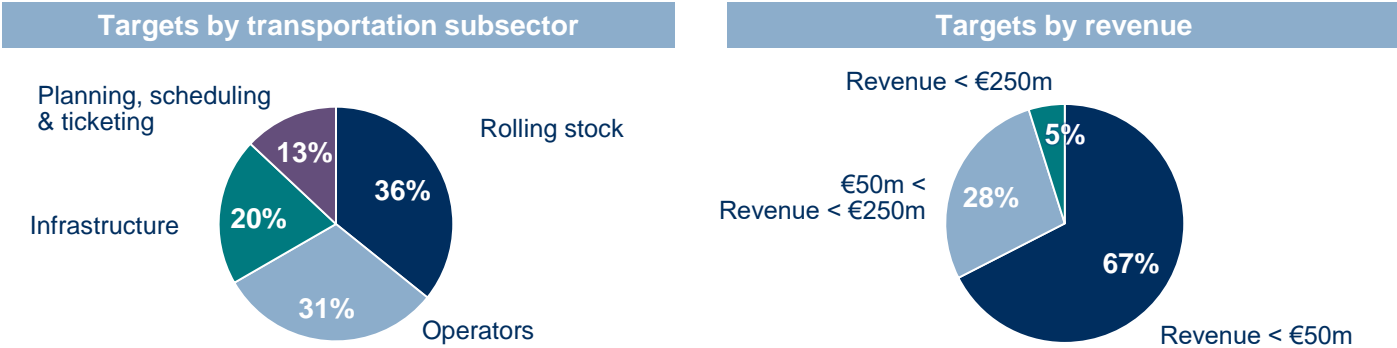
REGULATORY FRAMEWORK

- Regulatory push towards improvement of environmental conditions, particularly within urban areas
- Further development of public transportation is one of the key solutions for reducing pollution and improving air quality in cities

M&A activity analysis

We have analysed 123 M&A transactions between 2016 and 2018 with either the target or the buyer being from German-speaking Europe (Austria, Germany, Switzerland). We took a comprehensive set of companies comprising OEMs and operators (including train, bus and car sharing) as well as suppliers of equipment for rolling stock, infrastructure and, planning, scheduling & ticketing.

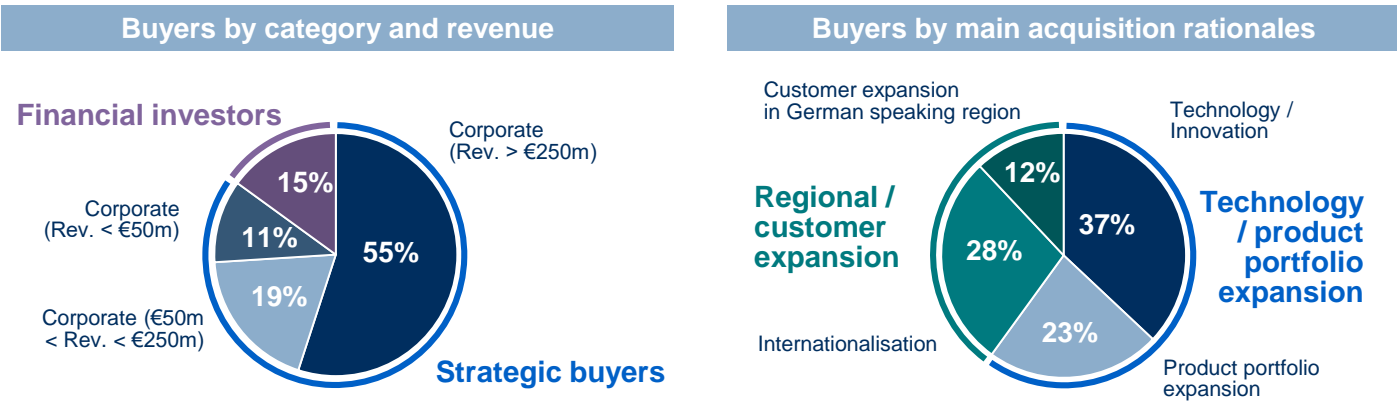
Who was acquired?



Findings:

- Companies from the subsectors rolling stock and operators have been targeted most by buyers (accounting together for 67% of all transactions). Corporates from the infrastructure subsector are ranking at third place and the subsector planning, scheduling & ticketing recorded the lowest M&A activity
- Transaction activity in the rolling stock subsector has been particularly high at suppliers of equipment, underpinning the currently ongoing consolidation. The already concentrated OEM space saw only a limited number of transactions
- On the operators' side, a broad consolidation of car sharing companies as well as bus and train operators led to significant M&A volume
- From a size perspective, the majority of the targets are in the smallest bracket (67%). Corporates with revenues above €50 million and above €250 million account for 28% and 5% of transactions, respectively

By whom and why?



Findings:

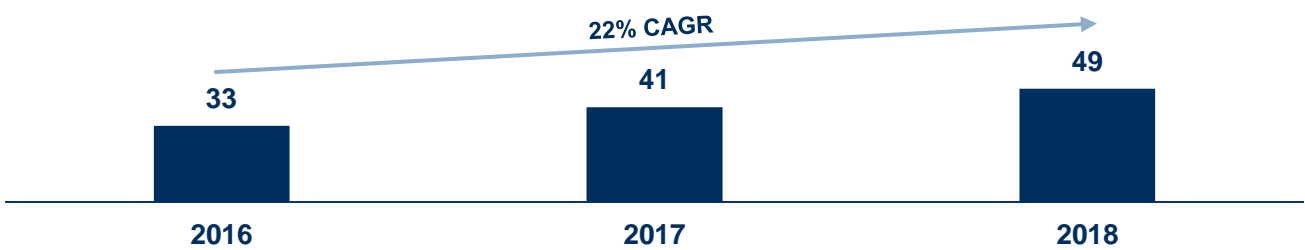
- Strategic investors (85%) have dominated the deal flow over financial investors (15%). However, financial investor activity is picking up. The share of transactions where a financial investor was involved amounted to 12% in 2016 and increased to 20% in 2018
- By taking a closer look at strategic buyers, unsurprisingly corporates with revenues above €250 million (55%) and revenues above €50m (19%) have been most active
- A key finding is that 60% of all transactions are motivated by technology / product portfolio expansion. In order to maintain and strengthen competitiveness, incumbents have realised the need to acquire these new technologies and related capabilities, e.g. software. The need for technology becomes even more important in light of the trend towards the provision of complete systems / solutions instead of stand-alone components

M&A activity analysis & conclusion

Findings (cont'd):

- In particular, technology / innovation is seen as the leading motivation for M&A (37%). A main reason for the interest in technology is the opportunity for tapping additional revenue streams and the speed at which new technology can disrupt traditional market segments
- Regional / customer expansion (40%) is also an important acquisition rationale. Suppliers of rolling stock equipment are looking for (international) OEM customer access including platform listings
- OEMs are searching for a diversification of the operator customer base and operators themselves are trying to increase their market share with the end customer (i.e. the passenger)

Number of transactions analysed by year ($\Sigma 123$)



Conclusion

The analysis shows a trend towards technology-driven acquisitions. Established incumbents are mainly looking for specific enabling technology buys, or product and competence additions to complement their own portfolio in order to provide more integrated solutions or add special capabilities. Regional and customer-based expansion is also an important motivation for M&A, as organisations attempt to diversify their sources of revenue or gain market share.

The steady increase in the number of public transportation M&A transactions serves as evidence that the aforementioned trends are intact, and that more M&A transactions are to come as part of the ongoing consolidation. We believe that this also holds true for the rest of Europe.

We expect the following key acquisition rationales to drive future M&A activity:

1	'BUY INNOVATION!'	Gain access to new technologies and innovative solutions
2	'SECURE KNOW-HOW!'	Secure in-house know-how and talented personnel ('war for talent')
3	'BE INSIDE!'	Access to the vehicle and its interfaces (information technology and computer science (ITCS)) / train control and management system (TCMS) is key
4	'BUY DIGITAL!'	New business models through mobility as a service (MaaS) and multimodality arise
5	'FOCUS ON THE PASSENGER!'	New business opportunities generated by enabling a better user experience for the passenger and actively utilising passenger data
6	'GO INTERNATIONAL!'	Diversification of revenues, 'follow your customers' and exploration of new opportunities in foreign markets
7	'CONSOLIDATE!'	Gain / maintain critical size in light of consolidation across the value chain

Contacts & recent credentials

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Recent credentials



Acted as exclusive financial advisor to HQ Equita on the acquisition of r2p and Open Access

Intelligent transport solutions





Joint Bookrunner / Lead Manager on the IPO of China CNR Corporation Limited

Rolling stock manufacturer and solutions provider





Advisor to Wabtec on the acquisition of Faiveley Transport

Integrated railway systems





Advisor to Consolis on the sale to Bain Capital

Railway infrastructure



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