tomorrow's transport techonology
smarter systems for smoother journeys

benefits for operators, passengers and the environment

worldline
e-payment services

an atos company

How travel is changing

More and more of us are travelling. And travelling further and more frequently, as populations grow and cities expand. At the same time, the way we choose, arrange and use travel services is increasingly technology-based. People have easier access to detailed travel information, and are more comfortable making their travel arrangements independently. These changes create fundamental challenges that the industry must address.

Providing greater capacity

This is a key challenge for transport operators. And in most cases, simply adding physical infrastructure isn't the answer. Meanwhile, governments are under pressure to get more people using public transport, and subject to tough environmental targets.

Factoring in environmental sustainability

Creating a greener public transport infrastructure – for example, by changing diesel trains to electric – is costly and slow, due simply to the sheer scale of what's involved.

Calling on wider insights and experience

Collaborating with organisations that specialise in key areas may be part of the solution. For example, bringing together experts in customer service, communications, seating and catering – with experts in travel infrastructure, ticketing and engineering – to help achieve the technology-based service and experience passengers have become used to in other aspects of everyday life.

Considering 'user experience'

People are increasingly tech-savvy, and expect fast internet access and reliable mobile signals as they travel. They also want more 'joined-up' ticketing systems, and access to up-to-date information to plan, pay for and make their journeys. And when things go wrong, they want real-time information that helps them make alternative arrangements.

The problem is, travel operators don't always have direct control of the key elements that combine and contribute towards improved 'user experience', and it can take considerable time to test and roll out more digitised solutions.

In short, providing these solutions can be challenging. But it's achievable – and doing it right simply requires a new way of thinking.

"Passengers are often way ahead of operators in their use and understanding of technology. It's time the operators caught up."

Alejandro Rametta
Global Product Manager, Worldline e Ticketing

13.2% of household spend

13.2% of every household's budget is spent on transport goods and services. Eurosta, 2015

115 million Euros investment

China is to invest over 115 million Euros in domestic rail way construction in 2015. Bloomberg, 2015

150m + public transport journeys

There are over 150m public transport journeys in Europe every day. uitp.org, 2015

7.3 billion air journeys

IATA predicts that there will be 7.3 billion annual passenger journeys by air by 2034. IATA.org, 2015

Ticketing and Technology

Predicting and preventing rail disruption

Improving ticketing with technology is recognised as a key way to bring about positive change for passengers and operators.

Worldline Automatic Fare Collection (AFC)
Worldline AFC systems take many forms, and can bring benefits to many scenarios. For example, AFC might support a wider range of payment methods, from coins to contactless, making passengers' lives easier and helping to tackle fraud and theft. And the technology can even integrate with fleet management and vehicle location systems to create invaluable data for reporting and planning.

However, technology is only part of the story. Passengers want seamless journeys, even if these entail multiple modes of transport and different operators. And right now, passengers still need to buy paper tickets or top up their cards, and then present, tap or insert their tickets as they travel.

AFC services of the future will eliminate all of this. Simply by entering the desired travel service using NFC services like Bluetooth on mobile phones, or wearable technology, passengers will no longer need to carry tickets or cards.

What's more, the secure data enhanced ticketing technology creates will present new opportunities for sharing information between operators on different legs of a journey, and with passengers.

But that's just the 'front office' side of things. What about how technology can work behind the scenes for operators and their passengers?

Let's take a closer look at rail travel, and how applying digital solutions in smarter ways can have widespread benefits.

Rail travel is growing fast, and passengers expect more.

So ensuring daily train services run on time will be key to rail's success as part of the multi-modal travel experience. And technology will play a significant role, not just in making people's journeys better informed and more 'joined up', but also in giving operators, agents and providers far more detailed and usable information with which to make better decisions.

Deciding how best to deploy critical resources can have a significant effect on passengers' experiences, and travellers need to know the effect these decisions might have on the services they use.

That's why Worldline has designed Worldline Integrale and Worldline ROMAN: to support decision-makers and passengers.
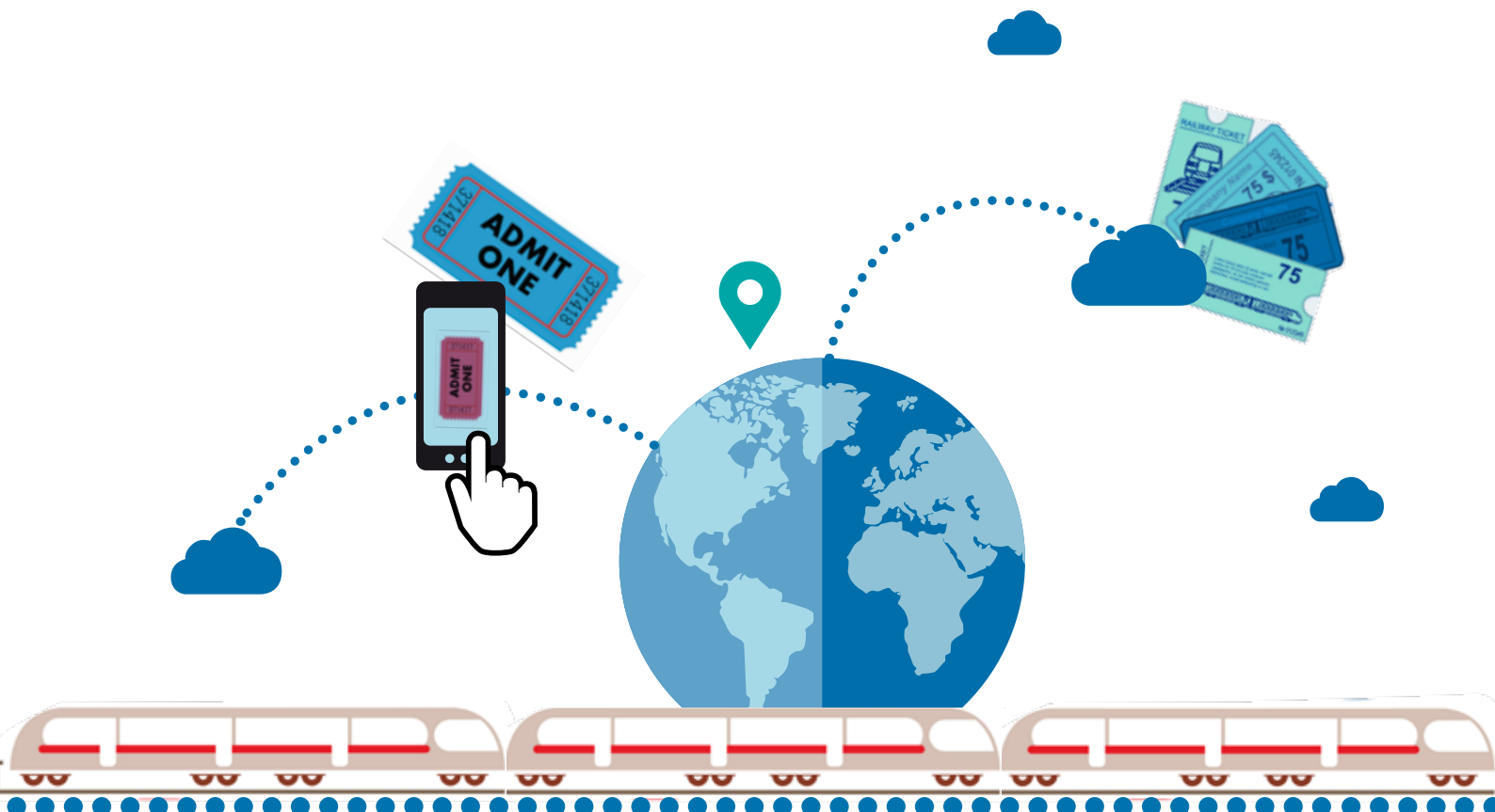
Enhanced operational decision-making with Worldline Integrale

Worldline Integrale makes it easier to share operational resource plans among operators and other stakeholders, and make better-informed decisions, faster. This reduces train delays, and also gives passengers much-improved access to real-time information about their journeys.

Arriva Cross Country already uses Integrale in its Birmingham Control Centre, and it will soon feature across First Great Western. Both Operators have risen to the challenge of making significant improvements by adopting intelligent and proactive technology systems. Systems that can meet rising passenger demands, control costs and help users and providers make better decisions.

Worldline Integrale is available now, and designed to meet today's needs, while factoring in passenger growth and ongoing changes to the UK's rail infrastructure.

"CrossCountry can expect fewer train cancellations and an overall improvement in train delays as a result of implementing this more advanced system"

Saf Akram, Head of Control, CrossCountry

Optimised route management and timetabling with Worldline ROMAN

Worldline ROMAN enables highly sophisticated operational management, with advanced and proven systems that can handle everything from automated route planning and simulation, to energy optimisation, collaborative planning, reporting and more.

It means operators can spend less time processing transportation demands, less money on timetable production and related requirements – and respond more quickly to customers' requests.

Worldline ROMAN works so well because it's 'component driven'. In other words, all its components share the same data, which is readily available at every step in the process and informs strategic long and short-term planning, real-time decision-making, and even invoice management.

"More than 20 million train journeys a year are based on Worldline ROMAN Timetable Planning"

Tony Lacy
Global Business Division Director, Worldline e Ticketing

Keeping pace with technological progress

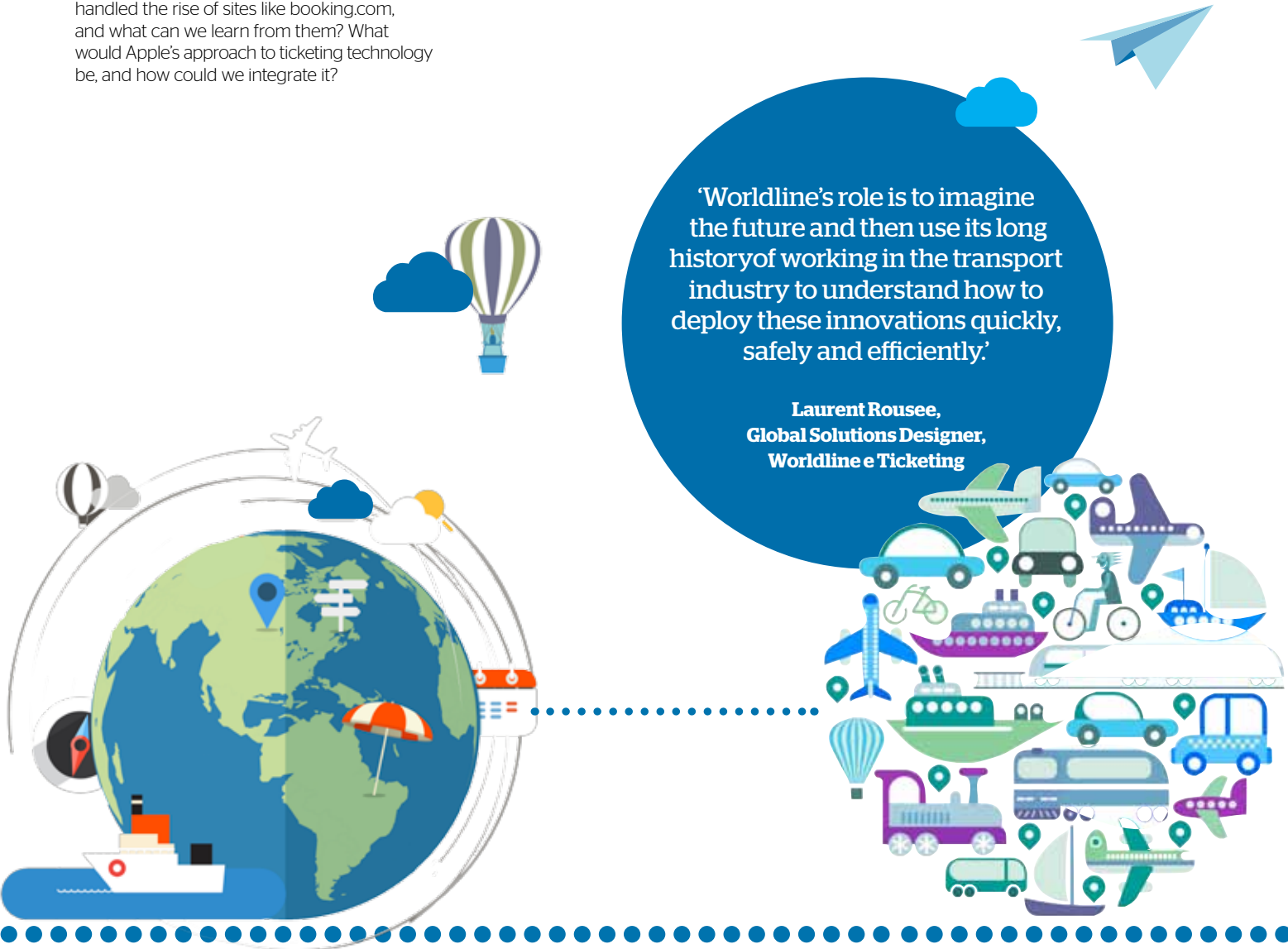# Harnessing the true value of data

It's clear that passengers want a more integrated and transparent ticketing service that represents better value. But technology is evolving fast, and it can become obsolete while operators and infrastructure providers are testing or implementing it. Meanwhile, many new ideas only cater for one element of passengers' demands – so many fail simply through lack of speed and scope.

This suggests we need to involve technology experts and providers with different approaches, from other sectors, when developing ways to meet current and changing needs for rail travel. For example, how has the hotel industry handled the rise of sites like booking.com, and what can we learn from them? What would Apple's approach to ticketing technology be, and how could we integrate it?

New technology such as these will also create significantly more passenger and travel data. Some of this will inform the travel industry, and some will inform other providers such as banks and mobile phone operators.

Using this data in smarter ways will not only help solve transport problems, but also provide a rich source of insight for related sectors. Technology is integral to achieving smoother multi-modal journeys for the tech-savvy generation.

'Worldline's role is to imagine the future and then use its long history of working in the transport industry to understand how to deploy these innovations quickly, safely and efficiently.'

**Laurent Rousee,
Global Solutions Designer,
Worldline e Ticketing**

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responsible forestry**