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What are the benefits of open transport ticketing standards to operators and authorities?

**Dispelling the myths of using open standards**



**Calypso**  
Networks Association

**ospt**<sup>™</sup>  
ALLIANCE



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A key objective of public transport is to provide mobility services for the communities that they serve. This can often include travellers from different cities, regions or countries. But mostly, it is about local people wanting to move around their town, city, region without hassle, cost-effectively.

So, why should transport operators and authorities care about ticketing standards? What benefit can they bring at a local level? Do they not just make ticketing and access control systems more expensive and complicated to implement?

In this eBook, transport ticketing standard bodies, Calypso Networks Association and OSPT Alliance have collaborated to dispel the myths around standardisation. It details the value and reality of using truly open ticketing solutions to deliver innovative, sustainable and cost-effective systems, with usability at the core.



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## What is a standard?

Standards are regularly developed at an international, regional or national level.

The International Standards Organization **(ISO) states:**

A standard is a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose.

The National Institute of Standards & Technology, U.S. Department of Commerce, **NIST states:**

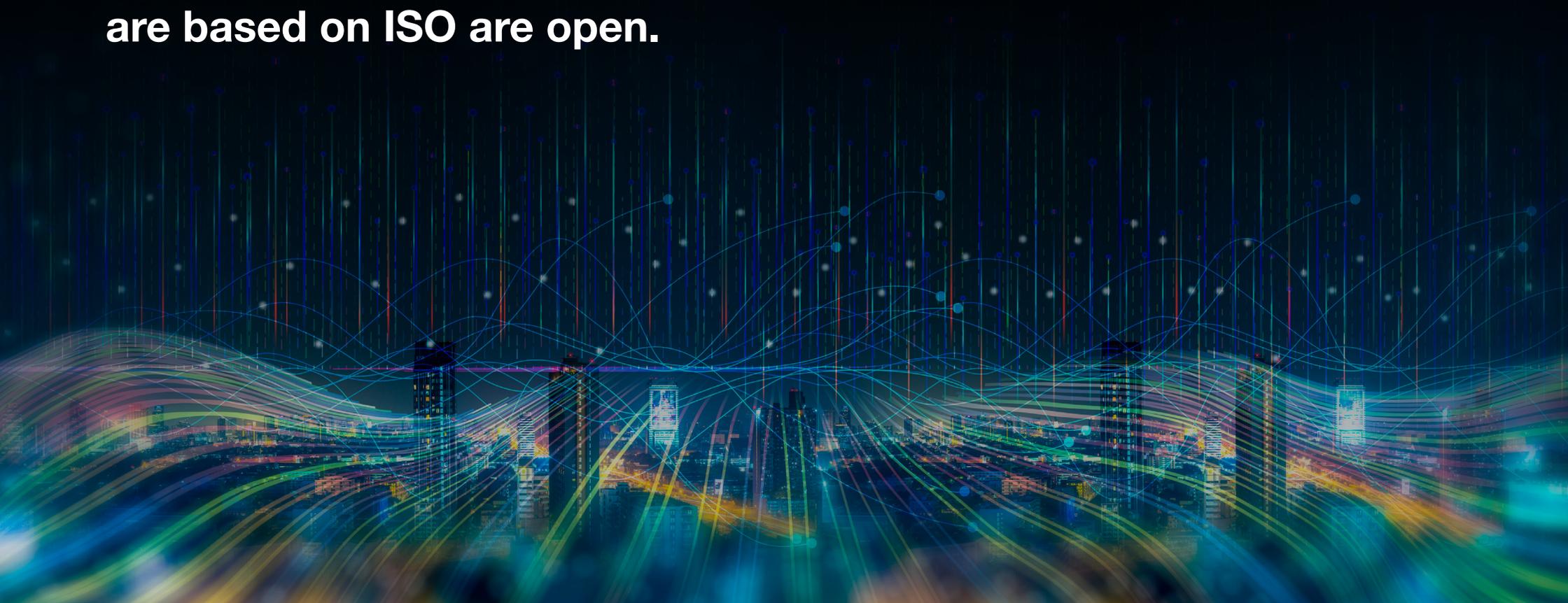
Standards allow technology to work seamlessly and establish trust so that markets can operate smoothly. They:

- provide a common language to measure and evaluate performance,
- make interoperability of components made by different companies possible, and
- protect consumers by ensuring safety, durability, and market equity.



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The myth:  
**all technology standards that  
are based on ISO are open.**







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## How do we know if an application standard is open?



**The governance of the standard.**  
Is it regulated by an independent body?



**User 'voice'.**  
Do the users of the technology have a final say in how it will evolve?



**Supplier choice.**  
How many suppliers can deliver this application to encourage open tendering?



**Community engagement.**  
Can all parties active in the marketplace participate in the body?



**Testing and certification.**  
Is there a verifiable and independent testing infrastructure in place?

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## Conclusion: Are all technology standards that are based on ISO open?



No, being ISO compliant is not enough to be considered an open standard. To avoid 'vendor lock-in' an operator or authority must ensure that no elements of the solution are proprietary.



2

The myth:  
**member-driven defacto standards can  
make a solution more expensive.**





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Never underestimate the total cost of ownership of vendor lock-in if using a commercially owned standard. Not only can this be financial by being tied to one supplier, but it can also present unknown barriers, for example, if an update is needed yet the vendor is not keen or does not have the financial motivation to deliver, or they prioritise another operator over you. The cost of such scenarios can be devastating.

Moving away from proprietary solutions and using a member-driven open standard as a baseline encourages cost competition in two ways:

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**Manufacturers can produce mass components, bringing down the unit price of a product.**

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**Operators and authorities can request competitive tenders when changes and upgrades are needed throughout the lifecycle of the system.**

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And it is not just hardware and components. Opportunities for software development kits (SDKs) to be standardised will also bring down application development costs for all parties. This is increasingly important as more and more ticketing options go digital and operators and authorities look to deliver a range of services through a travel application.

Standards also play an important job in guaranteeing backward compatibility. If a community of users is at the heart of a standard, it plays a role in dictating the pace of change. The ongoing commitment to backward compatibility can ensure system 'upgrades' over time, spreading lifecycle costs while not inhibiting how a system is evolving and innovating.



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## Conclusion: Can member-driven standards make a solution more expensive?



**No, the ability for all participants within the community to be able to input, share knowledge and shape the future of the technology helps to control and reduce costs by promoting competition, avoiding vendor lock-in, and encouraging production economies of scale.**



3

The myth:

**global member-driven open standards will not meet local needs and are not dynamic enough to support innovation.**





Bringing expertise, knowledge and experience together across a range of different ecosystem stakeholders can define and shape the future ticketing roadmap. It encourages best practice learning, which means we do not have to re-invent every upgrade or new service every time. This is particularly important as the sector embraces digital services.

While there are always local nuances, the key aim of offering seamless ticketing – to get from A to B – is a global requirement.

Sharing, defining and benefiting from this knowledge is invaluable.

Using member-driven standards as a baseline also allows manufacturers to focus on product differentiation. If the core element of the offering is standardised, resources can be focused on developing complementary services and features to innovate and define a unique selling point.

### Digitalisation of ticketing

While transport is delivered at a local level, today the tools and technology we use to enable the purchase and validation of a ticket are often global, such as a smartphone or wearable. These enablers must deliver seamless, convenient travel.

As transport ticketing embraces new forms of transport media, the need to define a baseline is essential to ensure transport ticketing can achieve its potential. A handset manufacturer will not want to invest in integrating a ticketing solution to each individual bus network globally; instead, they want to align with one standard that they know will effectively support all users – both operators and authorities, as well as the traveller.

*An example of this is Samsung enabling Calypso on all its handset from S8 onwards. It supports personalisation to a specific network to deliver ticketing services.*

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## Conclusion: Can globally define member-driven standards meet local needs and support innovation?



**Yes, they inspire effective innovation at a local level through experience and knowledge sharing, and competition.**

4

The myth:  
**defacto ticketing standards are about increasing market share for manufacturers**





**Standards provide operators and authorities with a basis for mutual understanding and are used as tools to:**

Facilitate business interaction.

Enable companies to comply with best practice and security requirements.

Speed up the introduction of innovative products to market.

Provide interoperability between new and existing products, services and processes.

Essentially, the role of standards is core to defining what an operator or authority needs. It gives a credible point of reference to successfully compare suppliers and effectively evaluate them – offering a like for like comparison. This encourages competition.

In transport ticketing, using member-driven community standards means that operators and authorities have assurances that they are at the heart of any ticketing standard development. They have the final say.

Bringing these groups together, alongside all the other players, creates the forum needed to evolve transport ticketing technology in a sustainable and engaging debate. Giving all actors a voice and platform to interconnect on visions and reality.

The role of manufacturers within this is essentially to share technology capabilities, trends and possibilities; inspire future evolutions and address technical issues.

*The role of independent testing and certification is crucial to achieving openness. It delivers a fair, trusted and sustainable marketplace by evaluating a product in line with a standard and confirming that it will perform as expected. If a product is certified, operators and authorities have confidence and can compare products 'like for like'.*

*As new and exciting partnerships are created, certification also offers reassurances that any new actor playing a role in the ticketing process can be trusted and will not compromise the existing systems. As we witness new ticket media and systems, the role of certification has never been more important.*

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**Conclusion:**  
**Do defacto ticketing standards increase market share for manufacturers?**



**Not if they are member-driven and provide the transport ticketing sector with the ability to create a credible point of reference to compare suppliers and reassurances that their systems meet market requirements. However, they may increase manufacturer market share if the defacto standard is commercially managed.**

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The myth:

**current standards cannot support MaaS,  
so a new standard needs to be developed.**



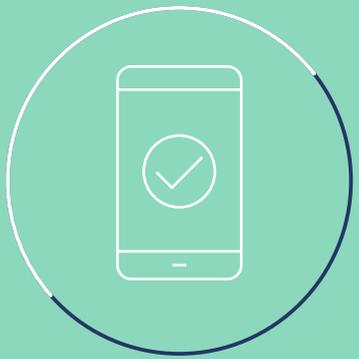


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## What is Mobility-as-a-Service?

The MaaS Alliance defines MaaS as the integration of various forms of transport services into a single mobility service that is accessible on demand.

This means operators offering diverse transport options through a simple application and payment methods open to all travellers, including public transport, bike / car sharing, taxi as an example.



MaaS is here today. It is offering travellers an alternative to using their private cars with the aim of not losing the convenience. The ticketing infrastructure supports and enables the services and is adapting to ensure it will be here for years to come.

But the ticketing system today is changing, and quickly. Continually challenging how we evolve is important. To optimise the value of MaaS – seamless, convenient travel – and recognising ticketing as the enabler, how can we best map the next generation of ticketing to fulfil the ‘gateway’ role that ticketing can, and should, play?

By working as a community, how can we shape our own future to deliver traveller needs effectively and efficiently? If we don't, will technology innovators take the lead?

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## Conclusion: Can current standards support MaaS?



**Yes, but making an investment today to evolve the next generation of ticketing standards will be the catalyst to define new joined up services at affordable costs in the future. It is vital that operators and authorities lead this innovation for ticketing to become the gateway to consumer mobility.**

# The Future







Want to know more? Visit [www.ticketingopenstandards.org](http://www.ticketingopenstandards.org)

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