I am pleased to share CNA’s 2022 Activity Report, which highlights the association’s progress and achievements over the past year.

2022 was another very unusual year, marked by the continued impact of the health crisis on public transport. Fewer passengers, even if public transport largely went back to normal, meant that the ticketing ecosystem remained affected.

Calypso was not immune to the crisis. Even though the number of cards reaching the market doubled compared to 2021, it remains significantly lower than in 2019, not due to weak demand from transport networks, but due to the shortage of components. This shortage will continue to exist in 2023 and will restrict a recovery that was expected to be very strong by more than 30%.

However, 2022 was a very dynamic year for the development of our standard: we have welcomed new members, which brings our membership to 108 participants as of the end of 2022, alongside important technical progress, new implementations, active promotion, positive exchanges and a large events programme.

I would like to emphasise the importance of the progress and technical results in 2022 despite the context mentioned above: new products essential for the development of Calypso – the Basic ticket and the Prime PKI card – have been put on the market; a growing number of ticketing players are adopting Keyple for easy integration of Calypso into systems, confirming the relevance of CNA choosing open-source a few years ago; the launch of work on Open SAM shows once again the willingness of the CNA Board to make Calypso a beacon for open standards.

But I would also like to remind you that CNA is not only the organisation that develops, promotes and regulates the Calypso standard. It is also a unique exchange platform where users and manufacturers can co-build the future of the standard to benefit the ticketing ecosystem. The CNA Board is determined to continue its efforts to make Calypso accessible to all. This means making the standard known, demonstrating its advantages, helping to implement it and innovating to make it sustainable.

I thank the CNA team for its ongoing work and dedication, and I extend my thanks to the whole Calypso community, including our users and partners, for their loyal contributions to the association over the years.

And, in this important year when we celebrate the 20th anniversary of CNA, let me say: long live Calypso!

Gianluca Cuzzolin
Chairman of Calypso Networks Association
27 YEARS OF TRANSPORT TICKETING INNOVATION

DID YOU KNOW?
CALYPSO originally stood for Contact And ContactLess Technology
Yielding a Platform for Service Operation

Our community is committed to further smart ticketing innovations. Here’s to more exciting years ahead!

1996
Launch of the ICARE project, financed by the European Community, to develop a contactless ticketing system for multimodal and multi-operator public transport environments

This is followed by the Calypso project launching transport ticketing and multiservice payment applications in five initial locations: Paris, Lisbon, Venice, Brussels and Konstanz

1999
Two first in-field deployments of contactless ticketing systems based on Calypso launch in two French cities, Nice and Amiens

2000
Session and Ratification Patents Registration, forming the heart of Calypso’s technology

Launch of the TRIANGLE project, precursor to Hoplink, to develop interoperability between European metropolitan areas, piloted on the Brussels-London-Paris triangle

2003
Creation of Calypso Networks Association, an ASBL (not-for-profit) under Belgium law

2006
First prototype Calypso transaction from a mobile phone NFC SIM card

2009
First delivery of a compliance certificate for Calypso Prime cards

2012
Creation of Calypso’s interoperable ticketing service, Hoplink

2014
First prototype Calypso transaction from a mobile phone NFC SIM card

2016
CNA reaches 50 members

2017
Setup of a permanent, dedicated CNA team, to better answer to the needs of the transport ticketing community

2019
Setup of the Calypso brand license, based on mandatory certification of products compliant to Calypso specifications

CNA reaches 100 members and ships 30 million cards over the year

2020
More than 40 certified Prime, Light cards and a certified Prime applet on Secure Elements or Javacards

2023
CNA celebrates its 20th anniversary

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Calypso enhances the security of mobile ticketing on Android devices, officially launching the Calypso HCE Security Certification (CHSC) scheme

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Launch of the Basic contactless ticket and of Calypso Prime PKI

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2022 in numbers

Number of members
108

Countries with Calypso deployment
29

Active Technical Committees
6

New members
- ASIS ELEKTRONIC
- BANCO AZTECA
- BILLING PAY
- CALMELL GROUP
- CONSEIL REGIONAL DE BRETAGNE
- EDY NOGA TECHNOLOGY
- GAPLET
- GCN ITS
- KENTKART
- MPESO
- PLANETA
- RTP
- SISWEB
- SOLARI DI UDINE SPA
- SPRINGCARD
- SYX GRAPHICS

Geographical
- 83 EUROPE
- 16 LATAM + BRAZIL
- 4 ASIA
- 3 NORTH AMERICA
- 2 AFRICA

Activities
- 3 ASSOCIATIONS
- 8 AUTHORITIES
- 20 OPERATORS
- 36 CONSULTANTS & SOFTWARE PROVIDERS
- 41 INDUSTRIALS
2022 highlights

Even though the first part of the year was still dominated by the pandemic, 2022 was a year marked by the strong development of Calypso, not only on a technical level, but also a strong recovery of the promotional activity and exchanges with and between members, with prestigious events that welcomed many participants happy to renew face-to-face contact.

On the technical side, the end of the year saw the launch of Basic and Prime PKI products by our industrial members, resulting from specifications established by CNA working groups in previous years. These two new media are a very useful complement to the range of Calypso solutions, opening up our standard to occasional usage with Basic, a low-cost but highly secure ticket; and also to MaaS and the uses of new mobilities with Prime PKI, which allows the interoperability of services based on card-based and account-based architectures.

2022 also saw a significant increase in the number of players using Keyple, to integrate Calypso more easily and quickly into their ticketing offer, and the launch of work on Open SAM, a new generation of the Calypso security module, offering new functionalities and completely open, with the objective of being available as a multi-source offer.

The comeback of the events organised by CNA has been particularly appreciated by our members and the whole ticketing community. The Budapest forum, the Partners Day for the industry, the User Days in Venice, the Open Session in Paris have allowed us to renew with a rich programme of presentations and to enable networking, open stakeholder exchanges, share of knowledge, experiences and expertise.

And we welcomed the appointment at the General Assembly in May 2022 of a new Chairman for Calypso, Gianluca Cuzzolin.

Once again, over the year, with the dedication of the CNA team and the commitment of our members, Calypso has confirmed its leading position in the global market of open standards.
In 2022, taking advantage of the opportunity afforded by moving the technical documentation library to the main CNA website, a significant update of the Calypso documentation has been published. It includes more than 30 documents either new, updated or deprecated. CNA created an umbrella document, the Calypso Core that brings together the information common to all products and has reorganised the product specifications accordingly.

Eclipse Keyple, the open-source ticketing SDK, is a reference library to facilitate the implementation of Calypso applications in a terminal, making the software hardware independent and providing high-level functions to process Calypso transactions.

After the publication of Keyple 2.0 in 2001, which includes the main functions of Calypso Regular, 2022 was dedicated to the implementation of all Calypso Regular functions, considering the SAM functions, except the already-implemented security session. A special effort has been made in the documentation and examples. Work on Prime Extended and Prime PKI has been started and will be completed by mid-2023.
Certification of the Calypso cards

Calypso card functional certification process

The additional tests necessary for the certification of a Calypso Prime PKI card have been added to the test tool, as well as some evolutions of the specification leading to the certification of the first Prime PKI card at the end of the year.

In the same way, a dedicated tool has been used to validate the first Calypso Basic card.

Work has been initiated to develop a Calypso HCE functional test plan, as well as an upgrade of the Calypso Prime tool, in order to take into account the evolutions brought by Edition 2 of the Calypso Prime rev3.3 specification. These tasks will be completed by the end of 2023.

Paycert and CNA also strengthen the process test tool updates, by clearly defining the rules of transition.

Contactless interface in public transport

Paycert and CNA continue their cooperation to roll out and maintain a certification process for compliance with the European standard for the communication between contactless readers and fare media in public transport - CEN/TS 16794, supported by CNA’s technical expertise.

The level of activity was quite low in 2022, since seven card certificates were issued and six for terminals.

Eight products were certified in 2022:

- 2 x Calypso Prime Extended
- 1 x Calypso Prime PKI
- 1 x Calypso Basic
- 4 x applets: 2 x Java Cards & 2 x mobile eSE
Calypso certification for terminals

A contactless Calypso terminal software is divided into three layers to facilitate integration into terminals, ensure interoperability between layers, and to allow the modules to evolve independently of each other:

1. Reader Layer that provides a consistent and uniform interface, regardless of the reader provider (and even type of PO), ensuring that all readers provide a minimal common set of functionalities.
2. Calypso Layer that contains all the Calypso functionalities and Calypso settings.
3. Ticketing Layer that includes all the other components of the system like the Data Model processing and business rules management.

These requirements provide the basis for a terminal certification programme, which started in 2021 for the Calypso Layer and the Reader Layer. Pending the finalisation of this program and the implementation of a certification based on a technical evaluation, CNA has established a transitional registration procedure for the Calypso Layer and the Reader Layer of a terminal, which is based on a declaration by the vendors that they will comply with the Prime rev3.3 specification published by CNA in mid-2022.

Simultaneously, the Calypso Layer and Reader Layer test plans were achieved by the end of 2022, and CNA decided to internally manage the development of the tests tool based on Keyple from the start of 2023.

Open SAM

In 2021, CNA launched the development of a SAM Applet to prototype some technical solutions. After this first phase, it was decided to completely redraw the specification of the SAM to easily implement new features and enhanced functionalities written more than 15 years ago.

It was therefore decided to focus the work in 2022 on the drafting of this new Open SAM specification, which will be available for manufacturers who wish to make this development.

For this purpose, CNA has set up a working group, the TC SAM, which meets every 2 weeks and whose lead is provided by SNCF with the support of CNA’s internal teams.
Calypso mobile solutions

Calypso Applet
CNA provided customer support for the version 1.3.10 of the Calypso Applet delivered at the end of 2021. Versions 1.3.x are based on Calypso Prime Regular. A prototype to support Calypso PKI was developed, and implementation of the requirements of Prime Regular were published in the last Calypso Prime Specification (3.3 Ed2), with version 1.3.11 expected in mid-2023.

HCE and Calypso
At the end of 2019, CNA started a security certification process for a Calypso HCE mobile application with the objective to provide a scheme that gives a guarantee of a certain level of security to the end customer. The process is now fully available with two laboratories. A second vendor has now launched the certification process.
Promotion of the Calypso Standard

2022 saw the consolidation of our established activities dedicated to promotion of the Calypso standard. The representation office in Mexico has delivered a great impact on the regional stakeholder ecosystem, highlighted by numerous new members we gained in the region. Many new local market players have been onboarded to Calypso technology and more cities in Mexico have started to consider Calypso technology for their future smart ticketing schemes.

Besides our Mexican office, we significantly extended our footprint on the LATAM market through the successful work of our São Paulo office (CNA Brazil). Further milestones have included the work on regional UITP initiatives dedicated to MaaS and involvement in a national project dedicated to helping elderly mobility in Brazil.

In Africa, we have deepened cooperation with our local members in Senegal and Ivory Coast. Abidjan and Dakar are now the first Calypso-based ticketing in West Africa. We were also part of the Sustainable Mobility and Climate Week in Dakar in October 2022, as an active member of CODATU.

Looking to the European market, we have continued our strategic partnership with Asstra. We have organised a first meeting of the Italian members of our association to get a better understanding on how we can support them. Despite the ongoing conflict in Ukraine, we have supported the national transport operator association as far as has been possible. In Romania, we have continued to support the transport authority of Bucharest-Ilfov in its ticketing integration project and have reached out to newly appointed city mayors to support them in their path to reshape urban mobility.
Conference and event highlights

Several events were organised by CNA in 2022. All were held face-to-face and allowed the Calypso community to meet and exchange ideas, experiences and requirements:

**Smart Ticketing and Digital Services Forum**
> June 2022 in Budapest

Returning to a face-to-face format, the Forum in Budapest was an opportunity to discuss topics such as open standards, MaaS, urban mobility digitalisation, the recovery of public transport after pandemic, new digital challenges in railways, innovation in the field of ticketing … as well as a wonderful cruise on the Danube on a beautiful sunny evening.

**Partners Day**
> July 2022 in Paris

Our industrial members were able to exchange directly with each other and there was an opportunity to gather suppliers’ market visions and positioning of Calypso, while discussing the ongoing development of the standard. The meeting was also an opportunity to explore the projects carried out by the Advisory Board of adhering members and its mission to ensure the voice of manufacturers in the ticketing community is heard and continues to support CNA’s vision of a smarter, innovative and sustainable ticketing ecosystem.

**Calypso User Days**
> September 2022 in Venice

Our traditional and always successful event returned in 2022 after a three-year absence, welcoming more than 100 participants from across the public transport world. This conference was dedicated to MaaS and multiservice for all, as well as to mobile ticketing, with the participation of Apple and the NFC Forum.
The Calypso Open Session was held in three main sessions:

- First, the Tech Day, where attendees learned more about the latest technical and strategical developments of the Calypso standard.
- Second, the open session itself, to welcome the entire ticketing community in a friendly atmosphere in a prestigious venue, the Peninsula hotel.
- And third, the Calypso Awards ceremony was back. Always popular, this evening of stakeholder recognition saw Secretaría de Movilidad de la Ciudad de México (SEMOVI CDMX) awarded with “Best Customer Service” for its remarkable transformation of public infrastructure in Mexico City. SEMOVI CDMX has championed Calypso open standards as a cost-effective way to help address urban inequalities by providing more users with accessible ticketing. The “Best Innovation” award saw HID Global win for its work in mobile ticking. HID Global uses Calypso’s HCE (Host Card Emulation) offering for Android to create a solution that integrates multiple ticketing apps into a single digital wallet.
Industrial liaison


From an institutional perspective, we have continued our set liaison agreement with the NFC Forum by contributing use cases to the MIT SIG workstream. Since early 2022, we have held the chair position of the UITP IT&I Committee, and we have strengthened our position in the Smart Ticketing Alliance by running successfully for the chair position with a mandate for 2022-2025. In 2022, we successfully applied for the European Commission DG MOVE initiative Multimodality Passenger Mobility Forum (MPMF).

CNA is also an active contributor to the following associations:
• ADCET, with focus on developing multiservice usages; ECLIPSE, the global open-source foundation;
• ATEC Intelligent Transport Systems, with a focus on smart mobility;
• MEDEF, a leading network of entrepreneurs;
• CODATU, supporting sustainable urban mobility in developing countries;
• Club Italia, encouraging the use of public transport in Italy;
• Ukrelektrotrans, representing electric transport enterprises in Ukraine.

In 2022, the two associations agreed that as the market recovers from two years of significant challenges (e.g. COVID, geopolitical conflicts and climate issues …) an immediate merge of specifications is currently not appropriate. Instead, a unified effort to endorse and promote a collective approach to simplify open standard implementation for transport operators and authorities has been considered as a fruitful outcome of the convergence talks. CNA and OSPT will continue to work towards sustainable and innovative mobility for the urban transport market and to promote open standards across the industry.

Collaboration with OSPT Alliance

Ralph Gambetta
from CNA,
new chairman of Smart Ticketing Alliance
New resources for the CNA community

CNA continues its commitment to be a valuable resource to the contactless ticketing community, working to help its members stay informed and one step ahead. A new technical documentation library has been set up (see later in this report). Two brochures were produced on Eclipse Keyple and Prime PKI, completing the set of brochures currently available for Calypso Prime, Light, Basic and Calypso for Mobile.

An infographic «Calypso: 25 years of innovation» has been produced as part of the celebrations for CNA’s 20th anniversary in 2023, focusing on technical milestones since Calypso technology was first created.

Two new ebooks were made available: Eclipse Keyple: A Blueprint for a Smart Future, to help you discover the advantages of this open-source SDK from all points of view (authorities, operators, industrial...); and Calypso Live, a stunning set of use cases in different cities around the world that show how transport networks have been able to make the most of Calypso and drive local innovations.

We are also proud to continue to share on new insights and content with the ticketing community. Over the last year, this has included 10 articles on Transport Ticketing Trends, 2 press releases, and 110+ LinkedIn updates. The media continue to show interest in Calypso, with 10 editorial articles published in titles including Intelligent Transport, Rail Professional, Mobility Payments, Metro Report International, Global Banking and Finance review.
In 2022, CNA carried out a complete reorganisation of its documentation, starting with the technical documentation.

It is no longer necessary to visit several sites to access all the documents useful to those who want to know or master the Calypso standard.

All the documentation can now be accessed on the Calypsonet.org website via the Document Search tab, with four levels of access: public, registered, CNA members, or signed-NDA required, depending on the classification of the document.

The Document Search tab provides dynamic filters and tiered access levels for an easy-to-use, secure library, simpler functionality for an enhanced user experience, and a clear navigation and search process for all documents.
A new chairman for CNA

CNA held its 2022 General Assembly in Milan in May, in a hybrid format. Yann Poirier and Agnes Cougnard were nominated as new RATP board representatives at CNA, taking the seat from Philippe Vappereau, who retired from RATP. This resignation also meant that a new chairman was mandated for the remaining period of the 2020-2023 overall board mandate. The board elected the Vice Chair, from ACTV Venice, Gianluca Cuzzolin, as the new chairman of CNA.

The Board and the General Assembly took the opportunity to express their deep gratitude and respect for Philippe Vappereau’s presidency over the last decade. Since May 2022, Philippe Vappereau has acted as General Manager of CNA. The board thanked him for his willingness to continue his work from this operational perspective.

Advisory Board to begin its work

An important milestone in 2022 was the official launch of the works of the Advisory Board of adhering members. The four Advisory Board members elected in 2021 are Cubic, HID, Thales and Wizway. A significant outcome from the first year of exchanges was the creation of a Market Committee in order to meet the dynamic and rapidly changing market demands.

The first meeting of the Market Committee took place during Open Tech Day and provided a forum for stakeholders to discuss and seek new ways for Calypso to actively expand its global market position. The Advisory Board also proposed the creation of an approval system for Calypso cards combining the RF CEN TS16794 standard and Calypso certifications. This approval is now operational. All cards approved and presently shipped can be consulted at Calypso website.
In 2022, due to the impact of the pandemic, the number of shipped cards dropped from 20 million in 2020 to 10 million in 2021, representing a decline in brand licensing revenue for CNA.¹ But with a significant increase in the revenues of the ISO B patent (due to the increase of smartphones including an NFC chip), the 2022 incomes were at a very high level, at €2.1 million.

¹ There is a time lag of approximately one year between the shipping of a card by a manufacturer and the licensing revenue received by CNA.

The expenses of the permanent team may appear high. It is linked to the decision to internalise more technical developments than previously, of course to make substantial cost savings, but above all to have full control over these developments.

Calypso’s financial health

Calypso’s financial health is excellent, even better than last year with a rating of 83/100 (or international rating A) from CreditSafe, the multinational provider of on-line company credit scores and credit report information.
CNA’s priorities for 2023

In mid-2017, CNA’s Board of Directors validated a major action plan to ensure Calypso’s sustainability and to respond to the evolution of the ticketing ecosystem, both in terms of new technologies and solutions as well as new players. This 5-year plan was based on setting up a permanent team and finding a new technical and economic model for Calypso and CNA.

The new technical model was particularly original, as it was totally new in the world of ticketing and was a real challenge: it had to combine the switch of a patented technology to open source, for simple and rapid access to Calypso for all, with a strong certification policy, to guarantee interoperability for all users, regardless of their supplier. The new business model was to shift from a patent licensing policy (the last of which ended in 2022) to a brand license policy, based on certification of compliance with the specifications.

This plan was completed at the end of 2022, and the objectives have largely been met: the open-source model is in place, with the Eclipse Keyple SDK being used by more and more players. The certification programme is almost complete, the new business model based on brand licensing is operational, Calypso’s worldwide reputation is strong, and new implementations of Calypso have emerged, particularly in Latin America and Africa. Finally, CNA is a recognised platform for knowledge exchanges, experience sharing and services.

2023 is therefore a year of consolidation of these achievements: finalising the development of Keyple to cover all the functions of Calypso, finalising the certification programme with the terminals and HCE, and completing the full opening of the standard with the development of Open SAM. The economic model will be fully operational with the end of patent-based revenues and CNA will continue offering value-added services to all its members and, more broadly, to all actors in the ticketing ecosystem. This includes training, technical expertise, implementation support, security and operational analyses via the Security and Quality of Service Club.

All of the results achieved and actions in progress will allow us to fully celebrate the 20th anniversary of the association in 2023, looking towards the promising future of a technology that is undoubtedly the leader of open standards.

CNA, its Board members and its team, remain committed to undertaking the necessary actions to fulfil its mission in 2023, for the benefit of all members.
CNA’s mission

Connecting the contactless ticketing community

CNA is a not-for-profit organisation that brings together members of the transport, mobility and services communities to exchange ideas, experiences and requirements to advance open systems that support consumer ticketing needs.

Mission

To regulate and ensure the long-term sustainability of Calypso technology and promote open standards to enable their use across local, regional, national and global ticketing requirements.

Specifications

- Advance global standardisation through interoperable systems and open standards

Testing and certification

- Ensure performance, security and reliability

Calypso brand

- Promote trust and quality

Community

- Share knowledge, experiences and expertise

Collaboration

- Work together to create opportunity through open standards

The CNA community combines transport and mobility authorities, operators, and service providers, as well as technology manufacturers and transport consultants. It is a diverse and welcoming community which spans public and private sector organisations.
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<th>CNA members in 2022*</th>
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<td>CUBIC KENTKART</td>
<td>RATP SMART SYSTEMS</td>
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* Member list correct as of 31 December 2022
Join the CNA community

CNA provides a unique opportunity to exchange ideas, experiences, and requirements within a supportive and collaborative environment. By working together, it creates an opportunity to secure control over the smart ticketing ecosystem and create a sustainable framework for the future.

Member benefits

All CNA members benefit from greater ownership over the smart ticketing ecosystem via:

**Networking and collaboration**
CNA brings together the brightest minds within the transport and mobility community to share experiences and facilitate industry collaboration.

**Access to CNA’s working groups**
Join and participate in CNA’s working groups to promote open standards and influence the future direction of Calypso technology.

**Invitations to CNA’s global events programme**
Partake in CNA’s global programme of events, networking opportunities and annual awards ceremony.
Receive preferential rates on strategic support aligned to local, national or global ticketing requirements

Training opportunities

Gain new skills via preferential rates on CNA’s year-round training programme, tailored to member requirements

Technical support

Receive comprehensive technical support and preferential rates on Calypso technology

Strategic support and expertise

Receive preferential rates on strategic support aligned to local, national or global ticketing requirements

Exclusive access to Calypso technology documents

Access the Calypso library, including documentation, specifications and guidelines
CNA is managed by a Board of Directors appointed by the General Assembly every three years. There are currently 17 board members, represented by 17 officers.

**Board of directors**

**ACTV – Azienda Consorzio Trasporti Veneziano**
Chairman, Represented by Gianluca Cuzzolin

**LANDKREIS KONSTANZ**
General Secretary Represented by Zeno Danner

**RATP – Régie Autonome des Transports Parisiens**
Represented by Agnes Cougnard and Yann Poirier

**SNCF – Société Nationale de Chemins de fer Français**
Vice-Chairperson, Industrial Strategy Represented by Joël Eppe

**STIB/MIVB - Société des Transports Intercommunaux de Bruxelles**
Represented by Jean-Luc Van Ginder Deuren

**TML – Transportes Metropolitanos de Lisboa**
Vice-Chairperson, Keyple Development Represented by Sonia Alegre
5T-TORINO
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ASSTRA
Associazione Trasporti
Represented by Giovanni Foti

ATM
Azienda Trasporti Milanesi
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B-BUS
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CARRIS de Lisboa
Represented by Miguel Brito da Silva

GIE CARTES BANCAIRES
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CTS - Compagnie des Transports Strasbourgeois,
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ÎLE-DE-FRANCE MOBILITES
Represented by Laurent Probst

INTERPARKING
Represented by Roland Cracco

METROPOLITANO DE LISBOA
Represented by Fausto Sá Marques

INFINEON
Represented by Björn Scharfen
The CNA Team in 2022

CNA is led by a world-class team of industry experts with extensive knowledge and experience across the transport and mobility sector.

The team operates from Paris, Brussels, Lisbon, Konstanz, São Paulo, Mexico and the Island of la Réunion to support CNA and its members.

Gianluca Cuzzolin, Chairman
Philippe Vappereau, General Manager
Erik Baele, Treasurer
Neide Ohira, Finance Officer and Assistant
Ralph Gambetta, Promotion Manager
Manon Chaix, Public Relations and Communications Manager
CNA consultants around the world

The core team also benefits from local support across the globe. The extended team is available to answer any local questions with their regional knowledge and can also act as a bridge to the core global experts.

Ana-Maria Paladus
Danijela Baric
Artur Kassovicz
Yuliia Kuznetsova
Gianluca Cuzzolin
Claudio Giovannini
Fernando Portella
Enrique Gomez
Resources

CNA is committed to providing free, valuable resources for the contactless ticketing community including eBooks, brochures and blogs.

Calypso library
Access all the technical and non-technical documentation about Calypso, and CNA services, with a powerful Document Search tool.

Training programme
View CNA’s full training brochure with details of all modules, as well as information on how to arrange bespoke training tailored to specific requirements.

One-pagers
For all you need to know about Calypso Prime, Prime PKI, Calypso Light, Calypso Basic, Calypso’s solutions for mobile, Keyple, our short guides provide the perfect introduction, all available in the Calypso Library.

Guide for calls for tenders
The purpose of this document is to outline what is required in a call for tenders for Calypso contactless cards, NFC mobile ticketing systems and terminals to guarantee compatibility and scalability.

Calypso handbook
The CNA Handbook provides an extensive guide to the role, offering and governance of the Calypso standard. It is a must-read for both existing and potential users of the technology.

Newsroom
Read the latest updates and announcements from CNA in the newsroom.

Blogs
Read CNA’s official blog, Transport Ticketing Trends, to get the latest insights and commentary from the CNA team and its member community on contactless ticketing advancements, opportunities and challenges.

One-pagers

CNA offers a global programme of events for members and non-members throughout the year with the latest information on the website.

Newsletter
Subscribe to CNA’s monthly newsletter to stay up to date with the latest news, events and insights from the organisation. Your email address will never be shared with third parties and you can unsubscribe at any time.
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