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I am pleased to share CNA’s 2020 Activity Report, which highlights the association’s progress and achievements over the last 12 months.

As the governing body of Calypso technology, CNA was founded with one simple aim: to support the use of the open Calypso technology standard to enable transport and mobility operators to control and advance their contactless ticketing systems. Throughout 2020, our diverse community, incorporating 106 members, has worked tirelessly to advance our goals and progress our mission amid the challenging backdrop of a global pandemic.

In December 2020, CNA’s General Assembly reinforced that we have made strong progress, and this is reflected throughout this report. On a personal note, I was honoured to be re-elected as the Chairman of CNA and to have the privilege of leading the association in its efforts to control and evolve the contactless ticketing ecosystem through open standards. We also welcome three new participants to the CNA Board: Giovanni Foti of Asstra, Roberto Andreoli of ATM and Vitalijs Komars of B-Bus.

Now more than ever, CNA provides a truly unique opportunity to exchange ideas, experiences, and requirements within a supportive and collaborative environment. By working together, there is an opportunity to secure control over the smart ticketing ecosystem and create a sustainable framework for the future.

I extend my sincere thanks to the entire CNA team and broader Calypso community, including our users and partners, for their ongoing contributions to the association over the past 12 months. I look forward to the year ahead.

Best wishes,
Philippe Vappereau
Chairman of Calypso Networks Association
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

Certification
Ensure performance, security and reliability

Calypso brand
Promote trust and quality

Collaboration
Work together to create opportunity through open standards

Community
Share knowledge, experiences and expertise

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.
2020 in numbers

Members
106

Active working groups
8

Webinars and events
7

New members
16

ADVANIDE
ANY SECURITY PRINTING COMPANY PLC
ASSTRA
B-BUS
BUSSI
DIRECTORIO DEL TRANSPORTE PUBLICO METROPOLITANA
EXCEET CARD GROUP AG
ICUBE
LOGIPLUS
MASKTECH
MEDIAMOBILE ITALIA S.p.A.
PREFEITURA MUNICIPAL DE PORTO ALEGRE
ROBOTICA E INSTRUMENTACION INDUSTRIAL SA DE CV
SET SRL
SONDA S.A.
SP TRANS
Calypso Technology

- Manufacturers: 40
- Products certified: 38
- Shipped cards in 2020: 21.3+ million
- Countries worldwide: 27
- Cities: 160+
- Calypso-compatible terminals: 500,000
- Independent sources of chips: 3
Supporting the community during the Covid-19 pandemic

Throughout the pandemic, delivering value to CNA members has remained the highest priority. The association has continued to advance its mission via virtual channels with all working group meetings taking place online, alongside virtual webinars and events to support members and encourage collaboration within the community.

More broadly, contactless ticketing has been an invaluable tool for navigating many of the pandemic restrictions to date: it supports crowd management, reduces unnecessary interactions and minimises contact points. Yet its benefits are far-reaching beyond the pandemic: implementing open standards is integral to give transport authorities and operators control over their ticketing network for the future.
Technical milestones

**Eclipse Keyple**: CNA placed a strategic focus on open-source software, Eclipse Keyple, during 2020 as it is easy to use, flexible and accessible to all, enabling the community to build to the Calypso ticketing standard with no vendor lock-in. As a result, Keyple v1.0 is now available and the first on-field implementations of Keyple are already running. This demonstrates true innovation in open-source software, makes the Calypso standard even easier to use and reinforces its openness and ability to meet Mobility-as-a-Service (MaaS) requirements.

**Evolving CNA’s certification**: In 2020, the certification program for portable objects was transferred to Paycert, the independent certification body, enabling a truly unbiased process. Defining, maintaining and ensuring the use of the Calypso certification programme is vital to create a trusted foundation and confidence that Calypso ticketing solutions are sustainable, scalable and compatible today and in the future. Following feedback from members, CNA also launched a programme to establish the functional certification of Calypso terminals. CNA’s recent Certification eBook is a valuable resource to learn more.

**Further developments from CNA’s working groups in 2020 included**:
- A complete overhaul of the documents concerning recommendations for reader programming
- The delivery of the applet version 1.3.9.
- The launch of security certification process for the HCE mobile application
- An update of the document database on Calypso Technical Support website
- HCIA (HCE Calypso Interoperable Application) solution in the context of Hoplink
- The delivery of the Basic specifications, completing the Calypso range of cards

**Expanding CNA’s global presence**: Demand for Calypso in Latin American prompted CNA to appoint representation in Mexico City in 2020. Furthermore, CNA’s Italian desk secured a strategic partnership with the Italian transport operator association, Asstra, which became a member of CNA in 2020.
Global programme of events

CNA offers a global programme of events for members and non-members throughout the year. In 2020, they provided an important opportunity to network with other industry professionals, learn new skills, discuss challenges and collaborate. CNA’s team regularly participate in industry events for the transport ticketing community.

CNA webinars

Joint webinar between CNA and OSPT members to announce the collaboration January 2020
The webinar announced details of CNA’s collaboration with OSPT to drive the global adoption of open standards in transport ticketing. It was delivered to CNA and OSPT members ahead of the formal public announcement.

How to reclaim your ticketing system with open-source and Keyple October 2020
Tailored to a French speaking audience, this webinar explained the advantages of open-source technology and the strategic value it can add, with insights on how to control costs, guarantee functionality, openness and how to request it within a tender process.

Discover Eclipse Keyple: the open-source SDK for ticketing October 2020
The webinar provided an important overview on Keyple for the open-source community, with an opportunity to discuss common challenges with transport ticketing technology, open-source solutions and pose questions to CNA’s experts.

Calypso: a full range of certified products for all your needs November 2020
The webinar explored interoperability, future sustainability and cost management to demonstrate how to establish a best practice approach to certification.
CNA virtual events

**Online Partner Day**
*July 2020*
Conducted entirely digitally, CNA’s Partner Day discussed a new industrial strategy for terminal interoperability and certification, facilitated in large part by CNA’s Keyple framework. It presented an important opportunity for partners to discuss strategic approaches and challenges and receive CNA’s guidance and support.

**Industry events**

**Open Transport Meet-Up in London**
*January 2020*
Alongside Cubic Transportation Systems, Kisio Digital, Stratageeb and Wizway Solutions, CNA participated in the industry meet-up dedicated to open-source solutions in the field of ticketing.

**Nouvelle Aquitaine Mobilités (MaaS) seminar**
*September 2020*
CNA’s Chairman, Philippe Vappereau, delivered a presentation on the value of open-source and Keyple for ticketing within public transport.

**UITP Latam**
CNA participated in UITP’s Latin America Week 2020 with a virtual booth.
Collaboration with OSPT Alliance

CNA and OSPT Alliance have continued to collaborate to drive global adoption of open standards in transport ticketing, with the long-term goal of converging their respective standards - Calypso and CIPURSE. Members of the CNA community will know the dangers of vendor lock-in and why CNA and OSPT must work together to deliver the best possible ticketing ecosystem. Simplifying education around open transport ticketing standards, and helping a broader audience understand the value, is a key motivation in this collaboration with OSPT Alliance. It will empower public transport operators and public transport authorities to control and advance their ticketing systems.

For existing CNA members, this alliance represents a unique opportunity to further drive CNA’s core objective of evolving smart ticketing to become the central gateway to consumer mobility and access control services. The possibilities are limitless.
New resources for the CNA community

To ensure CNA continues to serve as a valuable resource to the contactless ticketing community, CNA launched its brand new website in 2020. It reflects CNA’s digital evolution and is packed full of important information for the transport, mobility and services community including:

- Comprehensive information on all CNA membership benefits
- Details of all upcoming CNA events and webinars
- Up-to-date information on all Calypso technology
- Details of CNA’s strategic services including training and technical support
- And much more…

2020 General Assembly and new Board members

The 2020 General Assembly marked the appointment of a new Board of Directors. CNA welcomes the following new members to the CNA Board:

- ASSTRA, represented by Giovanni Foti
- ATM, represented by Roberto Andreoli
- B-BUS, represented by Vitalijs Komars

The General Assembly demonstrated that CNA has made strong progress against its objectives to date and its focus is now firmly placed on driving future success. Working closely with this community, the new mandate for 2020-2023 will provide a strong foundation to empower the contactless ticketing ecosystem in the years ahead.

Strategic partnership: CNA joined the NFC Forum

CNA is pleased to become a liaison partner of the Near Field Communication (NFC) Forum and look forward to working with this community to advance the use and interoperability of NFC technology worldwide.
CNA’s strategic priorities for 2021

Technical advancements:
Alongside ongoing maintenance enhancements to existing technology, CNA continually seeks opportunities to ensure the Calypso standard is ahead of future user needs. The newly released Eclipse Keyple v1.0 is a clear example of this and work will continue to drive innovation in this area including the launch of Keyple v2.0 with all Calypso features, and the C++ version.

Trust and transparency:
Defining, maintaining and ensuring the use of the Calypso certification programme is vital to create a trusted foundation and confidence that Calypso ticketing solutions are sustainable, scalable and compatible today and in the future. With a full certification programme available for Calypso cards, CNA is currently creating a certification process for terminals, based on the interfaces of the Keyple API. This will further extend Calypso’s interoperability.

Educating and connecting the contactless ticketing community:
In promoting the Calypso standard, CNA is bringing members of the transport, mobility and services community together to benefit the entire ecosystem. CNA continues to provide a unique opportunity to exchange ideas, experiences, and requirements within a supportive and collaborative environment. During the ongoing pandemic, CNA will deliver a complete programme of webinars to stay connected and share important information, with the strong hope that community will be able to meet in person before the end of 2021. Delivering tangible value to members is of the highest priority.
With more than 40 manufacturers engaged with Calypso, 38 products certified and 3 independent sources of chips, Public Transport Operators (PTOs) and Public Transport Authorities (PTAs) have confidence that they will not be locked-in by a single vendor.

The Calypso standard is deployed in 27 countries worldwide.
### CNA members in 2020

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CNA’s 2020 turnover is the highest in CNA’s history. This is largely due to the very high sales of Calypso cards in 2019 - a total of 29 million cards, reinforcing the market demand for Calypso technology.

In 2020, the budget dedicated to promotion was significantly reduced due to the Covid-19 pandemic and the safety guidelines which required the cancellation of events, conferences and exhibitions. The available budget was reallocated to the technical developments of WG1.

### 2020 Main figures

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<tr>
<td>Turnover</td>
<td>312,460 €</td>
<td>1,783,500 €</td>
<td>2,095,960 €</td>
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<td>Expenses</td>
<td>178,810 €</td>
<td>1,794,330 €</td>
<td>1,973,140 €</td>
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<td>Result</td>
<td>133,650 €</td>
<td>(10,830) €</td>
<td>122,820 €</td>
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### 2020 Turnover

- Contribution members patents: 50%
- Calypso brand license: 45%
- Member yearly fees: 5%
- Product & service sales: 10%

### 2020 Expenses

- Team: 30%
- Support activities: 5%
- WG1 Technical Activities: 45%
- WG3 Promotion: 10%
- WG4 Marketing & Com: 10%
- Sales direct costs: 5%
Join the CNA community

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.

- **Strategic support and expertise:** 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.

- **Exclusive access to Calypso technology documents:** Access the Calypso library, including documentation, specifications and guidelines.

- **Technical support:** Access the Calypso library, including documentation, specifications and guidelines.
"The support of Calypso Networks Association was essential in the process of decision making, since they helped in the analysis of the possible scenarios and in the construction of a unified vision involving the needs of every transport operator."

Grégory Boissinot, RATP Smart Systems Paris, France

Viridiana Yelitza Delgado Yáñez, SEMOVI Mexico City, Mexico

"In order to ensure the openness and interoperability of our selected systems and equipment, Casa Transport contacted Calypso Networks Association for support. CNA evaluated the technology to ensure it was truly interoperable and could provide a sustainable framework that can evolve in accordance with CNA’s open standards guidelines. This project was delivered successfully and to the full satisfaction of Casa Transport."

Nabil Belabed, Casa Transport Casablanca, Morocco
CNA is managed by a Board of Directors appointed by the General Assembly every three years. There are currently 14 board members, represented by 15 officers.

- **ACTV, Venice Transport Operator**
  - Vice-Chairperson, User Committee, Promotion & Marketing
  - Represented by Morgan Chirici

- **ACTV, Venice Transport Operator**
  - Vice-Chairperson, User Committee, Promotion & Marketing
  - Represented by Gianluca Cuzzolin

- **OTLIS, Lisbon Transport Operators Consortium**
  - Vice-Chairperson, Keyple Development
  - Represented by Fausto Sá-Marques

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

- **RATP, Paris Transport Operator**
  - Chairman
  - Represented by Philippe Vappereau

- **SNCF, French National Railway Operator**
  - Vice-Chairperson, Industrial Strategy
  - Represented by Joël Eppe

- **STIB, Transport Operator of Brussels**
  - Represented by Jean-Luc Van Ginder Deuren
The Board would like to thank Rigas Kart, represented by Aleksandrs Brandav and Ilona Zaiceva, for their valuable contributions to CNA and the Calypso standard following their departure from the Board in 2020.

Departures from the CNA Board in 2020

- **ST-TORINO**
  Represented by Massimo Cocozza

- **ASSTRA**
  Represented by Giovanni Foti

- **ATM**
  Represented by Roberto Andreoli

- **B-BUS**
  Represented by Vitalijs Komars

- **GIE CARTES BANCAIRES**
  Represented by Pierre Chassigneux

- **CTS, Strasbourg Transport Operator**
  Hoplink Governance President, Represented by Alain Caffart

- **INFINEON**
  Represented by Katja Kienzl

- **INTERPARKING**
  Represented by Roland Cracco
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.
CNA correspondents around the world

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

Ana-Maria Paladus
Danijela Baric
Artur Kassovicz
Yulia Kuznetsova
Gianluca Cuzzolin

Claudio Giovannini
Renzo Brunetti
Fernando Portella
Guy Van Keer

Enrique Gomez
Marketing Manager

Updates to the CNA team in 2020

CNA would like to thank Valentina Zajackowski following her departure from the team in 2020. CNA warmly welcomes Neide Ohira as the newest member of the team.

CNA welcomes Enrique Gomez as the newest representative for CNA in Mexico.
CNA is committed to providing free, valuable resources for the contactless ticketing community including eBooks, brochures and blogs.

**eBook**

**Calypso Certification: For Ticketing Today, Tomorrow and the Future**

Learn why certification is needed, and the value it brings to the transport ticketing and mobility communities. CNA’s eBook makes it easy to understand all elements of Calypso certification and licensing with helpful guidance for manufacturers.

**Brochures**

**Member benefits**

Read CNA’s member benefits brochure to understand how members will receive greater ownership over the smart ticketing ecosystem, alongside access to networking, events and much more.

**2021 training programme**

View CNA’s full training brochure for 2021 with details of all modules, as well as information on how to arrange bespoke training tailored to specific requirements.

**Blogs**

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

**Newsroom**

Read the latest updates and announcements from CNA in the [newsroom](#).

**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.

**Events**

CNA offers a [global programme of events](#) for members and non-members throughout the year with the latest information on the website.
Headquarters
Calypso Networks Association
Rue Royale 76,
1000 Bruxelles, Belgium

Paris Office
Calypso Networks Association
2 rue de la Roquette,
Escalier Avril,
75011 Paris, France

ReadWrite CNA's recent eBook:
Calypso Certification: For Ticketing Today, Tomorrow and the Future

Read CNA's brochures:
• Member benefits
• 2021 training programme

Learn more about CNA's upcoming events:
calypsonet.org/events

Visit the CNA newsroom:
calypsonet.org/newsroom

Newsletter:
subscribe to the CNA newsletter via the contact form

Resources

www.calypsonet.org
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@calypsonet_asso
company/calypso-networks-association
Youtube Calypso Channel