

**EPOS  
ERIC**

**ANNUAL  
ACTIVITY  
REPORT  
2020**



The logo for EPOS ERIC, consisting of the word 'EPOS' stacked above 'ERIC' in a bold, white, sans-serif font, set against a solid orange background.

# EPOS ERIC

## ANNUAL ACTIVITY REPORT 2020

A decorative horizontal band featuring a teal wave-like pattern on the left and a solid orange section on the right.

Adopted by the EPOS ERIC General Assembly  
6 May 2021



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### Executive Summary

This document presents the EPOS ERIC 2020 Annual Activity Report and relies on the “EPOS ERIC 2020 Activity Plan” presented by the Executive Director to the EPOS ERIC General Assembly (Amsterdam 10<sup>th</sup> - 11<sup>th</sup> December 2019). The General Assembly acknowledged the EPOS ERIC Activity Plan for the year 2020, which is the second year of operation of EPOS ERIC. The 2020 EPOS ERIC activities have been designed as an essential element of the strategic planning for the transition from the Implementation Phase to the Operational Phase. This peculiar stage of the lifecycle of the EPOS Research Infrastructure (RI) has been named EPOS Pilot Operational Phase (EPOS POP) and it will last three years (2020-2022). The activities to be undertaken during the EPOS POP have been described in the EPOS ERIC Strategic Plan 2020-2022. They are designed to achieve two overarching strategic goals: building the EPOS Delivery Framework and consolidating its sustainability. To fully accomplish the overarching goals of the Strategic Plan, the following specific objectives have to be addressed:

1. Finalize ICS-C Hosting
2. Establish the TCS Governance and Coordination
3. Enable TCS Data and Service provision
4. Implementation and establishment of TNA provision and coordination
5. IT development of the TCS-ICS delivery system
6. Fostering Sponsored Research activities.

The EPOS SP project (2020-2022) coordinated by EPOS ERIC started its activities on February 2020 and it has also been included in the EPOS ERIC Strategic Plan. The EPOS SP project is in charge of harmonizing and managing the activities to move from the financial viability to the long-term sustainability of the EPOS RI. The activities envisioned in the EPOS SP are indeed fully coherent and integrated in the EPOS POP and the project represents a further support to the EPOS construction.

This document reports on the activities performed by EPOS ERIC in order to accomplish the objectives foreseen in the 2020 Activity Plan and it summarizes the incurred costs and revenues coherently with the EPOS ERIC 2020 Financial Statements.

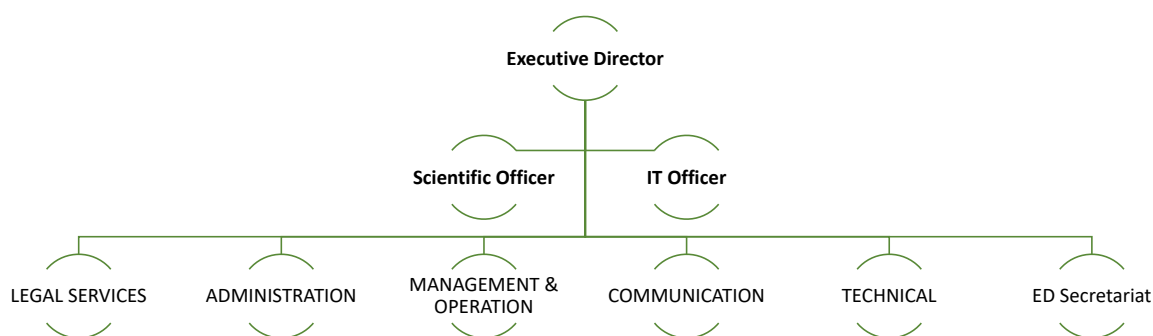
The implementation of the 2020 activity plan according to the 2020-2022 Strategic plan requires a full operational ECO. In particular, the following activities have been performed in year 2020 coherently with the Strategic Plan and the Annual Plan:

- Implementing and operating the Executive Coordination Office (ECO);
- Finalize the transfer of achievements from the EPOS IP project to EPOS ERIC and the HO to ensure the readiness for ICS-C to participate to the Pilot Operational Testing;
- Implementing ICS-C Hosting and Operation within the EPOS ERIC perimeter coherently with the EPOS ERIC Statutes;
- Support planned activities for the TCS-ICS interactions for testing interoperability with ICS-C;
- Support the construction of the TCS Governance structure and Coordination;
- Implement the legal, governance and financial frameworks to enable data and service provision, including the validation of TNA services;
- Support to EPOS ERIC activities including community building, dissemination and outreach.

This document also includes a section on the *Management Report* to provide an overall description of the ECO management of the activities, EPOS ERIC budget and available resources.

## 1. Operating the Executive Coordination Office (ECO)

The ECO has been organized in different units, each one having specific commitments and allocated personnel. The ECO organizational structure has been updated in 2020 as illustrated in Figure 1. The revised organizational structure of the ECO has been first delivered to the EPOS ERIC GA for the 5<sup>th</sup> meeting (April 2020) ([link to intranet](#)) and further updated and delivered to the EPOS ERIC GA for the 8<sup>th</sup> meeting (December 2020) ([link to intranet](#)). The delivered documents clarify the roles of the Scientific and IT Officers and of the available personnel and skills, and it provides a human resource plan for 2020 describing the expertise necessary to ensure the full operation of EPOS ERIC and the EPOS Delivery Framework. The ECO organizational structure and its update has been acknowledged by the EPOS ERIC General Assembly.



**Figure 1.** Functional Organization Chart of the Executive Coordination Office (ECO). The human resource plan of the ECO has been implemented in 2020 according to this structure as described in a dedicated document.

The agreement signed on January 29<sup>th</sup> 2019 by the ED and the INGV President regulates the INGV commitments for the provision of the host premium for hosting the legal seat of EPOS ERIC, and confirms the temporary secondment of Massimo Cocco to EPOS ERIC to act as Executive Director for two years (following Resolution N.2/2018 of the EPOS ERIC GA, November 8<sup>th</sup> 2018). According to Resolution 13/2019 (December 10<sup>th</sup> 2019) the annual total cost for the salary of the ED corresponds to €170,000 composed of the salary provided by INGV for his current position and a liability allowance. This is indeed the cost included in the 2020 provisional budget. The actual cost incurred for the ED salary and included in the 2020 balance sheet is **€170,053** as shown in Table 1.

The ECO staff is guaranteed by three different funding sources, as illustrated in Table 1. First, according to the selected bid to host the legal seat of EPOS ERIC, personnel is seconded by INGV as the Italian in-kind contribution (IKC). The bid foresees the provision of INGV permanent staff seconded to EPOS ERIC (Italian IKC) for a total cost of €291,000 that is part of the total Italian Host Premium (corresponding to €1,023,000). The cost envisioned in the 2020 Provisional Budget for these human resources corresponds to €240,800.70 (see Table 1) and it refers to 8 people for 54 person/months in 2020 (4.6 Full-Time Equivalent FTE), including the Scientific and the IT Officers.



This cost does not include overheads, not applied by INGV. Including a 25% flat rate overhead for personnel would yield a cost of €301.000 for 2020, thus fully confirming the Italian commitment. The actual cost included in the 2020 balance sheet for INGV IKC is **€246,674.12** (see Table 1) and is declared in the EPOS ERIC 2020 Financial Statements.

Second, personnel are hired by INGV (temporary positions) using funds from the Italian Host Premium and provided in-kind to EPOS ERIC. The cost envisioned in the 2020 Provisional Budget for these further human resources corresponds to €88,194.29 (see Table 1) and it refers to 4 people for 23 person/months in 2020 (2 FTE). The actual cost included in the 2020 balance sheet for in-kind personnel from host premium is **€85,973.55** as declared in the EPOS ERIC 2020 Financial Statements.

Third, the ECO staff is also composed of personnel hired directly by EPOS ERIC. The human resource plan for 2020 foresaw the hiring of 5 people (5 FTE). The cost envisioned in the 2020 Provisional Budget for this implementation of the ECO staff corresponds to €154,000 (see Table 1). The Head Administration Unit was hired on April 1<sup>st</sup> 2020, being previously provided in-kind by INGV using the Italian Host Premium. One IT staff was hired on December 1<sup>st</sup> 2020 (starting date was delayed for personal health issues). The Web-Manager and IT communication expert was hired on December 2020, but his starting date has been postponed to 2021 in order to allow him to conclude the previous working grant.

The selection procedures to hire the Head Communication Unit and a Communication Manager were concluded at the beginning of 2021 because of efforts required to manage the selection. This explains why the actual cost included in the 2020 balance sheet for personnel hired by EPOS ERIC is **€58,942** less than the allocated budget. Two experts are hired through consultancy grants: one a senior IT expert for support the ECO to deal with the European Open Science Cloud (EOSC) universe and a senior operational and scientific manager for community building and maintaining the Cost Books. The former started his activities on June 2020, the latter on January 1<sup>st</sup> 2021.

The total cost for human resources including EPOS ERIC personnel and experts hired through consultancy grant is €75,957.83. Table 1 summarizes the costs for ECO human resources declared in 2020 Financial Statements.

**Table 1.** Costs for ECO Human Resources

Name/N° people	Role / profile	Financial Sources	P/M year	Envisioned Costs (€)	Expenditure (€)
Massimo Cocco	Executive Director	EPOS-ERIC budget	12	170,000.00	170,053.00
8 people	ECO staff	Secondment: INGV in-kind personnel	55	240,800.00	246,674.12
4 people	ECO staff	Host Premium: in-kind personnel	24	88,194.29	85,973.55
2 people	EPOS ERIC personnel	EPOS ERIC budget	10	154,000	58,942.00

Table 2 summarize the operational costs for the ECO. The costs envisioned in the 2020 Provisional Budget for ECO operation corresponds to a total budget of €465,000. The budget for supporting ECO activities (see Table 2) has been mainly taken from the cash contribution foreseen in the Italian Host Premium (€425,000).

The effective cost included in the 2020 balance sheet for ECO operational activities corresponds to **€156,750** that is lower than the allocated funds in the 2020 Provisional budget. A large portion of the under-expenditure is due to the effects of the COVID-19 pandemics, which make impossible the organization of meetings and traveling (€124,000 is the associated under-expenditure) and reduced the requirements for IT equipment and consumables (€36,731 is the associated under-expenditure).

The comparative analysis of the envisioned costs and the expenditures shown in Table 2 also provides important indications for the future implementation of the EPOS ERIC provisional budget, including an update of the 2021 provisional budget. In particular, the expenditure for Outsourcing Financial/legal Management Consultancy is more than twice the envisioned costs. This is due to the unexpected need for expertise on legal services for the implementation of collaboration or partnership agreements, which is difficult to ensure through recruitment strategies. To tackle this issue, a consultancy grant for legal services has been signed with an expert of ERIC regulation and operation. It is important to emphasize that in 2020 the ECO dedicated a huge amount of efforts and resources to implement and finalize collaboration agreements necessary to the construction of the EPOS Delivery Framework. This legal framework was known to be complex and adaptive solutions were envisioned to coordinate the implementation activities. The choice to rely on procurement of legal services rather than recruiting personnel with legal skills was necessary because of the difficulties in hiring personnel with the necessary experience and expertise. For this reason, the costs for outsourcing legal consultancy were not envisioned in the 2020 Provisional budget. These costs also include the services for the chartered accountant and the labour consultants, both essential for the daily operation of EPOS ERIC. The expenditure for outsourcing ECO operation for 2020 is zero because of the decision to operate EPOS ERIC with internal human resources and skills.

**Table 2.** *Envisioned costs and actual expenditures for ECO operational activities*

Other costs to set up ECO supported by the Italian cash contribution (cash HP)	Envisioned Costs (€)	Expenditures (€)
Outsourcing ECO Operation	0.00	3,931.00
Outsourcing and Financial/legal Management Consultancy	40,000.00	89,831.00
Audit firm for internal auditing	20,000.00	10,550.00
External Advisory Boards	20,000.00	0.00
General Assembly Meetings	60,000.00	0.00
Meetings of the Service Coordination Committee and EC	10,000.00	27,709.00
IT Equipment	20,000.00	0.00
Other Services (Website, Intranet, ....)	200,000.00	17,000.00
Consumables Dissemination and other supplies	25,000.00	2,178.00
Miscellaneous	20,000.00	0.00
Travels	50,000.00	5,551.00
<b>TOTAL</b>	<b>465,000</b>	<b>156,750.00</b>

The External Advisory Boards (Scientific and Ethics boards) have been formally established in October 2020 (Resolutions 7/2020 and 8/2020, October 6<sup>th</sup> 2020). Face-to-face meetings with the external boards were not possible so far.

The Service Coordination Committee (SCC) has been established in 2020, first through the establishment of an interim committee and subsequently through the formal recognition by the EPOS ERIC GA according to the approved Section 1 of the Implementing Rules (Resolution 4/2020, June 17<sup>th</sup> 2020). The Executive Committee (EC) has been also formally established in 2020. Its composition and tasks have been defined in Section 1 of the Implementing Rules (Resolution 4/2020, June 17<sup>th</sup> 2020).


## 2. Hosting the Integrated Core Service Central Hub (ICS-C)

Finalizing the hosting of the Central Hub of the Integrated Core Services (ICS-C) ensuring its operation was a priority action for EPOS ERIC in 2020 (being a specific objective of the Strategic Plan) together with the transfer of the EPOS IP project achievements concerning the ICS-C prototype to EPOS ERIC and the Hosting Organizations (HO).

To accomplish the latter task, an “Inter-Institutional Collaboration Agreement” (IICA 2019) was signed by EPOS ERIC and the HO (BGS, BRGM and GEUS) at the beginning of October 2019 having three months duration (ending on December 21<sup>st</sup> 2019) and the possible extension to March 31<sup>st</sup> 2020 to ensure the completion of the agreed work plan. The extension was endorsed by the EPOS ERIC General Assembly on December 10<sup>th</sup> 2019 and EPOS ERIC and the HO signed the “Reconnaissance Deed in application of the Inter-Institutional Collaboration Agreement”. Therefore, the IICA 2019 effectively ended on March 31<sup>st</sup> 2020. The IICA was also necessary to create the readiness conditions for the subsequent ICS-C hosting for operation. The IICA 2019 also included the provision of in-kind contributions by the four signing parties to share resources and skills for finalizing the transfer of developments from the EPOS IP project to the three HO under the EPOS ERIC coordination.

The EPOS ERIC budget allocated to support the transfer of achievements regulated by the IICA 2019 was **€195,500** and, because of the extension, it was identified in the 2019 balance sheet as deferred income finalized to this spending commitment and was included in the constrained cash carry over, as explained in the Notes to the Financial Statements for 2019. Following the Technical Report provided by the signing parties on April 2020 and the Financial Reports provided by each party, the payment was finalized by EPOS ERIC in 2020.

The hosting of the ICS-C and its operation has been considered a necessary achievement to undertake the activities envisioned for 2020 in the Pilot Operational Phase of the EPOS RI (EPOS POP), as described in the 2020 Activity Plan. For this reason, during its 4<sup>th</sup> meeting held on December 2019 the GA recommended *“the ED and the Hosting Organizations to proceed with the elaboration of the suitable legal agreement(s) for the ICS-C hosting 2020 onward to be ready by April 2020, provided that the transfer of achievements is completed, and to propose to the GA agreed solutions to address the issues associated with the financial and legal management of the ICS-C hosting”* (extract from the minutes of the 4<sup>th</sup> GA). Therefore, the definition of the legal and governance framework to manage the ICS-C hosting by the HO became a key activity for 2020.



The HO nominated the ICS-C Director, who took an active role in planning and executing the activities dedicated to finalize the ICS-C Hosting and Operation. Meetings were organized in the first months of 2020, involving legal and financial experts from both EPOS ERIC and the HO, in order to report the progress to the GA on April 2020 as requested. Discussions focused on the revision of the Partnership Agreement to be signed by both EPOS ERIC and the HO. This became necessary because of the provision of host and in-kind contributions to be included in the EPOS ERIC Financial Statements, implying the definition of specific agreements with each ERIC Member acting as hosting country for ICS-C. The multi-year Partnership Agreement was revised to include an annual work plan and a Technical Annex defining the technical framework, the dedicated assets and the activities to monitor the ICS-C performances.

Regrettably, these meetings and consultations were unsuccessful and for this reason the ED declared during the 5<sup>th</sup> meeting of the EPOS ERIC GA (April 2020) that the risk of failure in ICS-C Hosting and Operation was extremely high and that *"there is no progress with respect to previous information given during the GA held in December 2019. For this reason, in April 2020 this risk further increased"* (extract from the minutes of the 5<sup>th</sup> GA). Therefore, the GA approved *"the establishment of a Working Group (WG) to explore viable solutions to proceed with the finalization of ICS-C hosting addressing technical, financial and legal issues overcoming existing hurdles. The WG is asked to present possible solutions at the next GA meeting in June 2020 to be discussed. The GA is expected to agree on the way forward, which will be then implemented by the end of 2020 at the latest"*. The WG was established early May 2020 and worked intensely in May and June 2020. The WG reported in June 2020. The GA adopted the resolution 5/2020 June 17<sup>th</sup> 2020 (<https://repository.epos-eu.org/index.php/f/8793>) recognizing that: (i) all necessary actions to finalize the hosting and operation of the ICS-C will be coordinated by the EPOS ERIC Executive Committee; (ii) the launch of the Pilot Operational Testing (EPOS POT) is a key milestone for the implementation of the EPOS ERIC Strategic Plan and the readiness of ICS-C has to be assessed within September 2020; (iii) the adoption of viable solutions for ICS-C hosting relies on the distinction among Host Premium, In-Kind Contributions and In-Kind Resources; (iv) it is recommended to the HO to continue exploring the approach and the solution proposed in the Final WG Report; (v) it is necessary to sign a new IICA for ensuring the access to and the use of ICS-C for the running of the POT.

The activities undertaken in the first half of 2020 clarified the interconnections among the legal, governance and financial frameworks associated with the ICS-C Hosting and Operation as well as the relevance of respecting the EPOS ERIC governance structure, giving a clear interpretation to the meaning of positioning the ICS-C within the EPOS ERIC perimeter. An effective progress was achieved on the definition of the technical framework, as corroborated by the implementation of the Technical Annex.

The progress on finalization of ICS-C Hosting and Operation were further discussed during the 7<sup>th</sup> meeting of the EPOS ERIC GA held on October 6<sup>th</sup> 2020. The ED delivered a report on IKC provision for ICS-C hosting and the HO delivered a proposed solution for financial reporting, including audit and certification. The ED also delivered a second report concerning the solution proposed by the HO. The Executive Committee started coordinating discussions and consultations to finalize ICS-C Hosting and Operation. During its 7<sup>th</sup> meeting the GA adopted Resolution 6/2020 (<https://repository.epos-eu.org/index.php/f/9268>) recommending the ED and the HO to continue working on the ICS-C hosting following the timeline presented by the ED during the 7<sup>th</sup> meeting of the GA with the expectation to sign the multi-year partnership agreement within February 2021.

The EPOS ERIC GA recognized February 28<sup>th</sup> 2021 as the ultimate deadline for finalizing the ICS-C Hosting and Operation accordance with the currently agreed framework. Resolution 6/2020 also included the request for a Report on ICS-C Hosting and Operation for the 8<sup>th</sup> meeting of the EPOS ERIC GA specifying the information to be provided to the GA as well as the invitation to sign the new Inter-Institutional Collaboration Agreement (IICA) to provide resources to make the ICS-C available for the running of the POT.


The EPOS ERIC Executive Committee intensively worked in October and November to provide the requested information to the EPOS ERIC GA for the 8<sup>th</sup> meeting scheduled on December 15<sup>th</sup>-16<sup>th</sup> 2020.

Eight meetings of the Executive Committee (EC) were organized in three months (September 4<sup>th</sup> – December 4<sup>th</sup> 2020). The agenda and the minutes of the EC meetings are shared with SCC members through the EPOS intranet. Two recommendations and two ED reports were delivered to the GA in order to prepare the December meeting. The EC meetings were successful to better define and agree on the requirements to finalize the ICS-C hosting and to ensure its operation within the EPOS ERIC Governance structure. In particular, the necessity for the HO to get a Mandate Letter by the ERIC Member acting as hosting country for ICS-C in order to provide host premium (HP) as envisioned in the EPOS ERIC Statutes and as declared in the selected bid. Indeed, the French Ministry formally submitted the Mandate Letter to the General Assembly to endorse BRGM to provide host contributions on their behalf. The EC members did not reach an agreement in identifying a shared approach to propose contingency solutions to manage the delays in finalizing ICS-C hosting and the risk of failure in this vital undertaking. The assets and the human resources necessary to host and operate the ICS-C were not defined because of hurdles in identifying and adopting cost models and costs certification solutions suitable for the inclusion of the HP and IKC in the EPOS ERIC Financial Statements. The EC also worked to share the contents of the new IICA necessary to ensure the access to and the use of the ICS-C for the POT, with particular attention to overcome the bottlenecks that delayed the financial reporting of the 2019 IICA. Despite these further efforts the EC members did not reach an agreement in providing suitable solutions to the GA for ICS-C Hosting and Operation to be adopted within February 2021. Accordingly, the ED informed the GA that the risk of failure in finalizing the ICS-C Hosting and Operation within the expected deadline of February 28<sup>th</sup> 2021 was still extremely high (being not decreased since October 2020). During the 8<sup>th</sup> meeting the EPOS ERIC GA adopted Resolution 13/2020 (December 16<sup>th</sup> 2020) in which the GA recognized the need to continue the work on the outstanding issues around the ICS-C Hosting and Operation described in Resolution 6/2020 and confirmed that the work has to be conducted by the EC integrated with relevant experts designated by the ECO, the HO and GA. This formally established the Integrated Executive Committee (IEC) that is working since January 2021 to find a solution to this long-lasting issue.

The funds allocated to the ICS-C Hosting and Operation for year 2020 corresponded to the annual EPOS ERIC contribution envisioned in the EPOS ERIC Statutes, that is €300,000 as envisaged in the 2020 provisional budget. For the reasons explained above, it was not possible to finalize this expenditure in 2020. Therefore, the funds allocated for ICS-C hosting contributed to the cash carry over for year 2020.

Finalizing the ICS-C Hosting and Operation requested an unexpected number of human resources for the entire 2020, from ECO, HO and GA, whose costs are not included in the EPOS ERIC Financial Statements. The work done in 2020, both in the WG and in the EC, although intensive,





did not lead to an agreement on the conditions to manage the ICS-C Hosting and Operation coherently with the EPOS ERIC governance structure and Statutes. Therefore, GA established an "Integrated" Executive Committee (IEC, integrated with a member of the GA and IT and scientific experts) to continue the work in 2021, asking to provide a report immediately after the key milestone of February 28<sup>th</sup> 2021. At the time of writing this report, the IEC is writing its second report including a final assessment on the conditions to finalize the ICS-C Hosting and Operation and start its operation within the summer 2021. The new IICA has been signed with starting date on January 1<sup>st</sup> 2021 including a work plan to operate the ICS-C for supporting the EPOS POT.

### 3. Service Activation of TCS Governance and Coordination

The establishment of TCS Governance and Coordination was another priority action and a specific objective of the 2020-2022 EPOS ERIC Strategic Plan. Addressing this objective required the implementation of a suitable legal and financial framework as well as the consolidation of the EPOS ERIC governance structure. The latter represents a key contribution to the community building and relies also on the signature of TCS Consortium Agreements by a relatively high number of national and international research organizations. The implementation of the legal framework consisted of drawing up collaboration agreements with TCS coordinators endorsed by the community to act as service provider for TCS Governance. To this task, it was necessary to identify and share viable solutions to manage the legal agreements from administrative, financial and accounting point of views. The implementation of the financial framework consisted of revising the TCS Cost Book, in order to update the costs for TCS Governance and distinguishing them from those for outreach and dissemination. Establishing TCS Governance and Coordination after signing the TCS Consortium Agreement is a key step toward the construction of the EPOS Delivery Framework and the EPOS ERIC governance.

The activities for addressing this specific objective of the Strategic Plan were coordinated by the ECO and in particular by the Management and Operation Unit and the Administrative Unit. During its 6<sup>th</sup> meeting (June 2020), the EPOS ERIC GA unanimously approved the "Activation of TCS Governance and Coordination" and the "Structure and content of the Collaboration Agreement". This decision allowed the ECO to start signing individual Collaboration Agreements with TCS in 2020 to further implement and optimize the contents of legal contracts to the specific needs of each TCS together with the definition of shared work plan and associated costs. These activities allowed the definition of the structure and contents of the Multi-Year Collaboration Agreements (MYCA) for TCS Governance and Coordination as well as the identification of costs to be included in the 2021 Provisional Budget. Indeed, the EPOS ERIC GA adopted the Resolution 10/2020 (December 2020) to approve the actions described in the Service Activation Roadmap, the eligibility of costs for the operation of TCS Governance and Coordination services for the years 2021-2023, and the endorsement to negotiate the MYCA with each TCS. Therefore, the service for TCS Governance and Coordination is activated and considered eligible for operation.

The funds allocated in the 2020 provisional budget to support the establishment of TCS Governance and Coordination correspond to a total amount of €550,000. The actual cost included in the 2020 balance sheet for TCS Governance and Coordination is **€ 113,291.90**, of which **€ 93,266.52** included as expenditure in the 2020 Financial Statements and **€20,025.39** are considered as deferred income finalized to this spending commitment and were included in the

constrained cash carry over. The under-expenditure is essentially due to the short duration of the signed 2020 collaboration agreements (on average three months). Collaboration agreements were signed with four TCS (namely, Seismology, GNSS Data and Products, Anthropogenic Hazards, Multi-scale Laboratories). Two TCS supported the activities related to the establishment of TCS Governance with national funds (namely, Near-Fault Observatories and Volcano Observatories). The other TCS worked to sign the MYCA 2021-2023 in 2021.

It is expected to sign the MYCA (2021-2023) for TCS Governance and Coordination within summer 2021 for all the nine TCS having the Governance service validated.

#### **4. TCS, ICS and Community Meetings**


The EPOS IP project (2015-2019) was extremely successful in further implementing the concept design of the EPOS Delivery Framework accomplished during the Preparatory Phase as well as in developing the architecture of the EPOS RI creating the TCS-ICS system. The prototype of the central hub of the Integrated Core Services (ICS-C) has been fully implemented and delivered to the HO in 2019-2020. The EPOS IP project certainly facilitated the community building within the EPOS research infrastructure by transforming the thematic Working Groups of the EPOS Preparatory Phase into the Thematic Core Services, the key components of the EPOS Architecture. Indeed, the TCS have been created in EPOS IP and formally established in 2020 through the signature of Consortium Agreements and Collaboration Agreements with EPOS ERIC. All this shaped the framework to conclude the implementation phase and enter in the Pilot Operational Phase (EPOS POP). The year 2020 is the first year of the EPOS POP: the specific objectives to be achieved and the key activities to be undertaken are well described in the 2020-2022 Strategic Plan.

The transition from the Implementation Phase to the Pilot Operational Phase required the engagement of the EPOS community to continue working on the implementation, the construction and the operation of the EPOS Delivery Framework. The importance of keeping the community involved and committed in EPOS was recognized as a strategic action to manage this transition between two vital stages of the lifecycle of the EPOS RI.

To this task, it has been envisaged in the 2020 Provisional Budget the allocation of funds to support community meetings, with particular attention to meeting the TCS communities, ICS meetings and TCS-ICS interactions. This action was envisioned also because of the unavoidable delays in signing the Collaboration Agreements with TCS in 2020 as well as of the problems impeding the finalization of ICS-C hosting. The funds allocated in the 2020 provisional budget to support the establishment of TCS, ICS and Community Meetings correspond to a total amount of €200,000. Because of impediments caused by the COVID-19 pandemics, it was impossible to use these funds and consequently there are not expenditures to report for 2020.

#### **5. Enable Data and Service Provision**

Enabling data and service provision is another specific objective of the EPOS ERIC 2020-2022 Strategic Plan essential to the construction of the EPOS Delivery Framework. Like TCS Governance and Coordination, initiating the provision of data and services requires the full implementation of



the legal and financial frameworks coherently with the EPOS ERIC governance structure. However, enabling the data and service provision also requires the full implementation of the technical framework. Data, Data Products, Services and Software (DDSS) have been validated in EPOS IP. The interoperability of data and services (or DDSS) with ICS-C is currently tested in the Pilot Operational Testing (see section 7 of this report), which is a strategic action started in 2020 to test the robustness of the data and service provision for evaluating the readiness for operation. Therefore, the technical framework created in 2020 allowed the initiation of the data and service provision.

TCS are positioned outside the internal EPOS ERIC perimeter and, as designed, the links with EPOS ERIC will be regulated by specific legal agreements (the abovementioned MYCA). This is the main difference with ICS-C, which is located inside the EPOS ERIC perimeter.

The activities undertaken in 2020 have been effective to implement the legal framework identifying solutions to manage the structure and the contents of collaboration agreements as well as the financial framework sharing solutions for cost declaration and certification and for IKC provision. The service providers entitled to sign the MYCA with EPOS ERIC to enable the data and service provision have been identified. The work done in 2020 has created the conditions for starting the consultations with service providers to start the process yielding the signature of MYCA for data and service provision in 2021.

The EPOS ERIC funds allocated in the 2020 provisional budget to support the enabling of data and service provision were €350,000. Unfortunately, further work is necessary to finalize the legal and financial frameworks to sign the MYCA with Service Providers. For this reason, it was impossible to use these funds and consequently there are not expenditures to report for 2020.

## 6. Establishing TNA Coordination and Provision

Establishing the TNA Coordination and provision is another specific objective of the EPOS ERIC 2020-2022 Strategic Plan. The timeline for enabling the TNA provision through TNA services differs from the data and service provision discussed above mainly because TNA services were not validated in EPOS IP. For this reason, the SCC has acknowledged the establishment of a dedicated Working Group to finalize the implementation of TNA services and their validation.

The funds allocated in the 2020 provisional budget to support the establishment of TNA Coordination and Provision correspond to a total amount of €80,000. These funds were dedicated to support meetings of the TNA WG as well as community meetings with the TCS involved in TNA provision (Multi-scale Laboratories, Volcano Observatories and Near-Fault Observatories). Because of impediments caused by the COVID-19 pandemics, it was impossible to use these funds and consequently there are not expenditures to report for 2020. Nevertheless, the WG has worked in 2020, through virtual meetings, and has delivered a document to the ECO at the beginning of 2021.

## 7. IT Development of the TCS-ICS System

The IT development of the TCS-ICS delivery system is also a specific objective of the 2020-2022 Strategic Plan. The implementation of the EPOS ERIC governance structure has pointed out the necessity to coordinate the IT development activities together with the TCS-ICS interactions as



two key elements for the construction and the operation of the EPOS Delivery Framework. To this goal the IT Board has been formally established to coordinate IT developments and the further implementation of the TCS-ICS system aimed at ensuring the operation of the EPOS RI. The IT board is composed of experts from ECO (IT Unit), ICS-C Office, TCS-ICS Coordination Team, and representatives from SCC and external IT cooperation. Moreover, the activities to be undertaken for advancing the IT Development, the ICS-C construction and operation and the TCS-ICS interactions have been organized distinguishing the development from the operation. In particular, ICS-C operation is a commitment assigned to the HO, which requires dedicated human resources and facilities. This is of course the highest priority for EPOS ERIC. The ICS-C operation is coordinated by the ICS-C Director through the ICS-C office, being a component of the EPOS ERIC Governance structure. The strategic planning for ensuring ICS-C operation is discussed and agreed in the Executive Committee and in the Service Coordination Committee, thus involving the ICS-C Director and the ICS-C technical and operational coordinators.

The IT development of the TCS-ICS delivering system is a commitment assigned to the IT board, chaired by the IT Officer. The TCS-ICS interactions are coordinated within this framework by University of Bergen, in order to ensure continuity with actions undertaken in EPOS IP as well as to keep engaged the existing skills capitalizing previous experiences. To this goal, EPOS ERIC and University of Bergen have signed a multi-year Collaboration Agreement to share resources for coordinating TCS-ICS interactions as the proper environment to further implement and build the EPOS Delivery Framework. Maintaining TCS-ICS interactions is relevant for sustaining the technical framework and to support community building and capacity building to operate the EPOS RI. The funds allocated in the 2020 provisional budget to support TCS-ICS Interactions and implementation of the TCS-ICS system correspond to a total amount of €100,000. The MYCA for supporting TCS-ICS interactions signed by EPOS ERIC and University of Bergen has a budget of **€93,910** for the first 15 months (October 2020-December 2021). The actual cost included in the 2020 balance sheet for TCS-ICS Interactions is **€13,753.48** and refers to three months activity (October-December 2020). The remaining cost of €80,156.52 is included in the 2021 budget, part of which (€42,923) represents the pre-financing given to the University of Bergen for the coordination of the TCS-ICS interaction for activities that will be undertaken in the 2021 financial year.

Among the activities foreseen in this specific objective, it is important to mention the coordination of the Pilot Operational Testing (POT). This undertaking is coordinated by the IT Board and belongs to the TCS-ICS interactions. The Pilot Operational Testing is an undertaking aimed at testing the interoperability and the robustness of the TCS-ICS system to ensure performances during the operational phase. Further implementation of services and development of new tools and services (such as a metadata editor to insert different metadata standards in CERIF) are coordinated through a shared roadmap with an effective workflow and timeline. The POT will last two years and belongs to the key actions foreseen in the Strategic Plan. Part of the funds allocated to IT development and TCS-ICS interactions were also dedicated to support the POT activities, in particular meetings, workshops and training initiatives. Unfortunately, the COVID-19 pandemics has impeded the organization of such initiatives in presence. Despite the under-expenditure, the activities have been performed remotely thanks to the efficient organization and planning as well as to the human resources provided in-kind by research organizations and the EPOS community.

## 8. Sponsored Research Activities

The Sponsored Research Activities represent a novel action foreseen in the 2020-2022 Strategic Plan in order to keep the community engaged, create collaborative frameworks for developing new services useful to the operation of the EPOS RI and for fostering innovation in data science and in sharing new scientific products. The first activity undertaken in 2020 was the implementation of a suitable legal and governance framework to manage the sponsored research activities. This action was not prioritized for 2020 because of the awareness of the possible difficulties encountered in implementing the legal framework for TCS Governance, ICS-C hosting and enabling data and service provision. The budget allocated in 2020 to support this activity was €100,000 aimed at supporting workshops and initiatives to engage the key actors in the EPOS community. Because of impediments caused by the COVID-19 pandemics and the low priority of this action, it was impossible to use these funds and consequently there are not expenditures to report for 2020.

## 9. International Cooperation and Global Dimension

Supporting international cooperation and strengthening the global dimension of the EPOS RI is a key action foreseen in the 2020 Activity Plan coherently with the EPOS ERIC Strategic Plan. This action is also included in the EPOS SP project (WP3) where the organization of an international conference was envisioned for 2020.

The funds allocated in the 2020 provisional budget to support international cooperation and the EPOS global dimension correspond to a total amount of €50,000. These funds were envisaged to support meetings with other international initiatives (such as AUSCOPE in Australia, IRIS and UNAVCO in the USA, among others) as well as to co-fund the international conference foreseen in EPOS SP. Because of impediments caused by the COVID-19 pandemics, it was impossible to use these funds and consequently there are not expenditures to report for 2020.

## 10. Communication, Dissemination and Outreach

Communication, dissemination and outreach activities were planned in 2020 in order to support the transition from the EPOS IP to the EPOS POP. The prototype of the EPOS ERIC Communication Plan, was completed in February 2020. Activities were envisioned to apply and adapt the practices and strategies envisioned in the prototype of the Communication Plan to the specific needs of EPOS during this stage in its lifecycle. The budget allocated in 2020 to support communication, dissemination and outreach activities corresponds to €200,000.

These funds were also envisioned to elaborate dedicated videos for different target audiences to communicate and disseminate the ERIC guidance and the service portfolio available within the EPOS Delivery Framework, as well as to disseminate the EPOS ERIC brand. The actual cost included in the 2020 balance sheet for meetings is **€9,859.88** and refers the Brussels meeting (SCC meetings) and to communication materials. The under-expenditure is mainly due to the consequences of the COVID-19 pandemics, which has impeded to organize meetings and workshops, and to the decision to postpone the elaboration of the videos to a later stage when new human resources will be available in the ECO Communication Unit, involving the new Head Communication Office in this undertaking.

## 11. Planning General Assembly

During the year 2020, the ECO organized four meetings of the EPOS ERIC General Assembly:

- 5<sup>th</sup> GA April 21<sup>st</sup> – 22<sup>nd</sup>, virtual meeting;
- 6<sup>th</sup> GA June 16<sup>th</sup> – 17<sup>th</sup>, virtual meeting;
- 7<sup>th</sup> GA October 6<sup>th</sup>, virtual meeting;
- 8<sup>th</sup> GA December 15<sup>th</sup> – 16<sup>th</sup>, virtual meeting.

A budget of €60,000 was allocated to support the organization of these meetings of the EPOS ERIC General Assembly. Unfortunately, due to the consequences of the COVID-19 pandemics it has been impossible to organize these meetings in presence. For this reason, there are no expenditures to report for 2020.

## 12. EPOS SP Project

The EPOS SP (EPOS Sustainability Phase) project was granted with the agreement N°871121 by the European Commission and started its activities on February 1<sup>st</sup> 2020 with three years duration (February 1<sup>st</sup> 2020 – January 31<sup>st</sup> 2023). The project is dedicated to support the long-term sustainability of the EPOS RI. EPOS ERIC is coordinator of the project. The total budget of the project is €4,998,093.75 involving 24 beneficiaries. Importantly, 10% of the budget is dedicated to support the participation of research organizations from countries that have not yet joined EPOS ERIC, but are in the process of doing it. This has been planned since the beginning with the purpose of strengthening connections with countries already involved in EPOS, but not yet EPOS ERIC members.

The National Authorities Consultation Board (NACB) has been established in 2020 within the EPOS SP project to keep National Authorities engaged and informed about the progress of the EPOS RI with the goal to foster their future entrance in EPOS ERIC. The EPOS ERIC General Assembly is also kept informed about the progress and the communication with the NACB.

The EPOS SP project represents the collaborative framework in which addressing the challenges of financial viability and long-term sustainability together with the EPOS community. The implementation of user strategy, the interaction with private sector and the added value for society are addressed in EPOS SP. Training is also undertaken in the project. The mapping and the description of the landscape of the EPOS Delivery Framework is an important activity of EPOS SP that has been designed to perform a detailed landscape analysis. EPOS SP is designed to deliver key outcomes to EPOS ERIC being considered the main actor exploiting project's achievements.

The costs for EPOS ERIC of the activities foreseen in 2020 for the EPOS SP project correspond to €160,000. The actual costs reported in the EPOS ERIC Financial Statements correspond to €143,497.15 (see Table 3). Despite the COVID-19 pandemics the project is on track and activities have been performed with very minor delays that are not considered relevant to increase the risk of failure of the project. The expenditure status is summarized in Table 3.

**Table 3.** Actual expenditures for EPOS ERIC activities in EPOS SP

COSTS SUSTAINED BY EPOS ERIC IN 2020 (€)				
PERSONNEL	TRAVEL	Other costs	Overhead 25%	TOTAL
96,117.98	342.50	18,337.24	28,699.43	143,497.15

### 13. Long-term Sustainability

Long-term sustainability is the most relevant and difficult challenge for a research infrastructure. The EPOS experience corroborates that sustainability involves four different interlinked dimensions: the legal, governance, financial and technical dimension. The current target is to strengthen the financial viability for operation of the EPOS RI and its delivery framework. The EPOS SP project is conceived to determine the conditions for moving from financial viability to long-term sustainability. The project, moreover, will also investigate the other dimensions with particular attention to the governance and technical sustainability.

The implementation of the legal agreements to build the EPOS delivery framework (namely, IICA, MYCA, Partnership or Framework Agreement, the Agreements to support Sponsored Research Activities) through dedicated activities undertaken in 2020 represents a key contribution to strengthen the legal sustainability of the EPOS RI.

Considering the 2020 EPOS ERIC available budget it was impossible to plan a one-step activation of the whole EPOS provision implemented in EPOS IP and described in the 2020-2022 Strategic Plan. Such a one-step activation was not feasible for both financial and technical reasons. Therefore, a staggered activation of the services has been designed. The EPOS ERIC Service Delivery Plan 2020-2022 was conceived to define the roadmap (i.e. timeline, workflow, and allocated resources) for each specific objective of the Strategic Plan, including the EPOS SP project, and foresaw the implementation of a roadmap for the progressive activation of services to move toward the full operation of the delivery framework. The Service Delivery Plan 2020-2022 was presented to and discussed by the EPOS ERIC General Assembly during its 4<sup>th</sup> meeting in December 2019. The aim of that document was to complement the Strategic Plan with a roadmap identifying the priorities for implementing the service delivery. The Service Delivery Plan depends on the achievements in each specific objective, in particular with those related with enabling and coordinating data provision and, more important, it relies on the Service Activation Roadmap, as a key element enabling the service provision.

The Service Activation Roadmap was therefore designed and implemented in 2020 as the tool to regulate the envisioned multi-step activation. The Service Activation Roadmap for years 2021-2023 was presented at the 8<sup>th</sup> meeting of the EPOS ERIC GA on December 2020. The term **Service** is used in the document to describe the **provision of assets** to be shared through the ICS-C, **actions** to be undertaken to operate the EPOS Delivery Framework and **activities** to support key initiatives enabling the participation to the construction of the EPOS Delivery Framework. The term **Activation** is intended as the process to formally link, through a legal contract, the TCS Service Provider and/or ICS HO to EPOS ERIC, according to the EPOS governance and financial structures.

The Service Activation Roadmap is designed to harmonize and synchronize actions during the EPOS POP coherently with the 2020-2022 Strategic Plan, being a fundamental element for implementing the service delivery plan. During its 8<sup>th</sup> meeting in December 2020 the EPOS ERIC GA decided to approve the contents of the Service Activation Roadmap, requiring more time to approve the whole document. This was sufficient to approve the eligibility for operation of the TCS Governance and Coordination service (already activated in June 2020) as well as to endorse EPOS ERIC to explore how to start proposing the activation of services for data provision in 2021.

The years 2021 and 2022 will be crucial to assess the financial viability and foresee the long-term sustainability of the EPOS RI.

## **14. Management Report**

The year 2020 has been the second year of operation of EPOS ERIC. The total revenues in the 2020 EPOS ERIC Budget are **€2,940,105** and are composed of the membership fees contribution (**€1,328,000**), the cash contribution from the Italian Host Premium (**€643,806**), the EPOS SP annual budget (**€143,497**), the valorisation of the in-kind contributions (**€630,047**) and the use of the cash carry over from the previous year (**€194,755**); moreover, the 2020 cash carry over of the financial statements is **€1,574,532**. The revenue from the membership fees differs from the one envisioned in the 2020 Provisional Budget (€1,400,000) because of the reduced Switzerland contribution acknowledged by the EPOS ERIC GA.

The present Activity Report describes the activities undertaken in year 2020 and reports their costs compared with those envisioned in the 2020 provisional budget. The 2020 Financial Statements and the Notes to the Financial Statements describe the financial status of EPOS ERIC at December 31<sup>st</sup> 2020 and identify the cash carry over at the end of the financial year. The latter corresponds to **€1,574,532**, of which **€1,531,609** is deferred income dedicated to support the continuation of 2020 activity plan and the EPOS POP activities and **€42,923** represents the pre-financing to the University of Bergen for the coordination of the TCS-ICS interaction (total cost €93,910) relating to activities that will be implemented in the next financial year.

The significant 2020 cash carry over resulting from the 2020 balance sheet to the 2021 EPOS ERIC budget, can be explained as follows:

- The consequences of the COVID-19 pandemics that has impeded to organize meetings, workshops and attendance in international conferences also implying expenditures for travels and lodging.
- The reduced expenditure for communication, dissemination and outreach due to the COVID-19 pandemics and the time required to increase human resources for the ECO Communication Unit.
- The unexpected delay in finalizing the ICS-C hosting, thus impeding the provision of the EPOS ERIC cash contribution to host and operate the ICS-C.
- The time necessary for the implementation of legal contracts (IICA, MYCA, Framework and Partnership Agreements) that postponed the activation of contracts with TCS.
- More work was required to activate the data and service provision signing MYCA with service providers.

The cash carry over from 2020 will be added to the 2019 cash carry over. They will be used in 2021 and 2022 to finalize the activities started in 2020, to support the activities necessary to complete the Pilot Operational Testing and to implement the EPOS POP for building the EPOS Delivery Framework.

Two years with relevant cash carry over can be considered as an indicator of an inefficient management of the EPOS ERIC budget or wrong financial planning. However, these are not the reasons for this relevant under-expenditure because activities have been undertaken despite the reduced expenditures. While the cash carry over in 2019 was essentially caused by the time spent



to build the ECO and EPOS ERIC accounting system, the cash carry over in 2020 has been determined by consequences of the COVID-19 pandemic. The explanation common to both years is the time and efforts necessary to implement the legal and governance framework determined by the dimension of the EPOS pan-European RI that delayed the signature of the collaboration agreements and the associated expenditures. It is important to point out that the 2019 and 2020 cash carry over will allow EPOS ERIC to financially support the activities during the whole EPOS POP, providing time to strengthen the financial viability and the sustainability of the operational phase of the research infrastructure. The 2021 provisional budget has been conceived with this perspective.

The total expenditure in 2020 for TCS and TCS-ICS interactions corresponds to **€107,020** composed of €93,266.52 for TCS Governance and Coordination and €13,753.48 for TCS-ICS interactions.

As previously described, the ECO operation relies on the Host Premium provided by Italy and quantified in the Italian Bid to host the legal seat of EPOS ERIC selected by the Board of Governmental Representatives and acknowledged by the EPOS ERIC General Assembly. The total Italian Host Premium to host the EPOS ERIC legal seat corresponds to €1,023,000 and it includes cash and in-kind contributions for the hosting of the ECO up to €732,000 and the secondment of INGV employees up to a total cost of €291,000. The Italian Host Premium for 2020 is detailed in Table 4.

The INGV in-kind contribution corresponds to **€246,674.13** (see also Table 1), while the host premium is €729,779.55. It is important to remind here that INGV is not declaring overheads on the costs for personnel seconded in-kind to EPOS ERIC. INGV usually adopts the H2020 standard of declaring 25% flat rate of the actual costs, which are not declared for the IKC provision to EPOS ERIC.

*Table 4. Italian Host premium for 2020*

Italian Host Premium	Provisional budget (€)	Provided in 2020 (€)
Cash contribution to ERIC	643,806.00	643,806.00
Personnel hired by INGV with the Italian funds (temporary positions) provided <u>in-kind</u> to ERIC	88,194.00	85,973.55
<b>TOTAL</b>	<b>732,000.00</b>	<b>729,779.55</b>
INGV Personnel seconded to EPOS ERIC ( <u>in-kind</u> )	240,800.00	246,674.13
<b>Grand TOTAL</b>	<b>972,800.00</b>	<b>976,453.68</b>

According to the activities and human resources reported in this document, the costs (**€246,674.13**) for the INGV personnel (permanent positions) seconded to EPOS ERIC is slightly larger than the envisioned costs (€240,800.00) because of the update of actual costs for salaries. Moreover, the INGV human resources envisioned for the in-kind provision to EPOS ERIC have been also committed for the EPOS SP EC project. In total, INGV seconded to EPOS ERIC 54 P/M (4.6 FTE)

but there are further human resources declared by INGV in EPOS SP as Linked-Third Party of EPOS ERIC. The latter are not counted in the EPOS ERIC balance sheet.

Furthermore, the difference between the envisioned (€88,194) and the actual (**€85,973.55**) costs for the INGV temporary positions hired through the host premium to be allocated in-kind is quite small and it can be explained with the short duration of the secondment for the Head of the Administrative Unit of the ECO (who has been hired by EPOS ERIC). Finally, there are no costs declared for the redevelopment of the buildings dedicated to host the offices of EPOS ERIC, since this expenditure is postponed to 2021.


The provision of in-kind contributions to support the planned activities is not limited to the host of the EPOS ERIC legal seat. In particular, IKC is included in the Inter-Institutional Collaboration Agreement (IICA 2019) signed in 2019 and concluded in 2020 involving EPOS ERIC and the Hosting Organizations. The latter declared a total value of IKC costs of **€297,399.36** representing further resources with respect to those supported by the EPOS ERIC cash contribution (€194,754). On one hand, this demonstrates that the parties have shared resources to support the common goal of transferring results from EPOS IP to the HO; on the other hand, this provides an idea of the financial volume of the collaboration agreements necessary for the construction of the EPOS delivery framework.

In this framework, it is also worth of mentioning the IKC provision associated with the collaboration agreements with TCS and TCS-ICS interactions. The total cost of the four Collaboration Agreements signed with TCS in 2020 is €219,718.97, which is composed of €106,964.32 of IKC provision and €112,754.65 of cash contribution from EPOS ERIC. Furthermore, the framework agreement signed with University of Bergen for coordination TCS-ICS interactions has a total cost of €120,450.00 of which €26,540 is the IKC provision and €93,910 is the EPOS ERIC cash contribution for 15 months activity (October 2020-December 2021).

As mentioned above, the financial status of EPOS ERIC is described numerically in the Financial Statements and detailed in the Notes to the Financial Statements. It is worthy to recall that these documents describe the financial status of EPOS ERIC at December 31<sup>st</sup> 2020, the end of the second financial year for EPOS ERIC. The current 2020 Annual Activity Report describes the activities and the associated costs referring to the Notes to the Financial Statements for the financial details.

## **15. The way forward**

EPOS is a pan-European distributed research infrastructure relying on a federated approach to integrate national and international research infrastructures from more than 20 countries and engaging more than 140 research organizations. Its governance model, designed and implemented during the EPOS Preparatory Phase and EPOS Implementation Phase (2010-2019), needs to be adapted to guide and operate the EPOS Delivery Framework. The financial viability of the EPOS Research Infrastructure is still under construction and its long-term sustainability represents the challenge and the horizon pointing the road ahead. The year 2019 represented the kick-off of this complex research infrastructure and the year 2020 has signed the transition from the implementation to the Pilot Operational Phase, guided by EPOS ERIC. The overall assessment of



the achievements in these two years can be considered positive, as corroborated by the successful conclusion of the EPOS Implementation Phase and the establishment of EPOS ERIC.

EPOS ERIC is now called upon to guide and make operational the EPOS Delivery Framework maintaining the momentum created by EPOS Implementation Phase, supporting an aware and motivated participation and coordinating the transition from the implementation to the operational phase. This transition has been designed in the 2020-2022 EPOS ERIC Strategic Plan, which has the task to tackle the challenge of building a long-term sustainable EPOS Delivery Framework.

The activities undertaken in 2020 have succeeded in the start the transition to the operational phase by implementing the EPOS ERIC governance structure through a practicable legal and financial framework. The cash carry over matured in 2019 and 2020 represents an opportunity to ensure the financial viability for the EPOS POP (2021-2022) and the successful completion of the Strategic Plan.

The activities presented in this report demonstrate progress in addressing the specific objectives envisioned in the Strategic Plan and emphasize the bottlenecks and the hurdles to overcome to proceed in the construction of the EPOS delivery framework.





