

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized

Public Disclosure Authorized



DJIBOUTI

DPCS

Introduction

In brief

Djibouti has gone through a high-profile and large infrastructure upgrade and expansion in recent years, which included USD 1.5 billion of investments in its ports and free zone infrastructure. This has led to tangible improvements in the operations of the ports. Besides infrastructure, trade facilitation through digitalization and information technology (IT) systems has also improved. This is particularly aimed at enabling faster and more efficient exchanges of import and export documentation.

The implementation of the Djibouti Port Community System (DPCS) in 2017 was part of a wider initiative. The project was launched following instructions from the country's President to the chairman of the Djibouti Ports and free zones authority (DPFZA) to set up an electronic single submission facility for import/export documentation.

As of today, the platform has been implemented through directives from the port and free zones authority and has involved both private and public sector stakeholders operating at ports in Djibouti.

Why the case study is significant

A key highlight of this case study includes its broad scope, including Maritime Single Window (MSW) functionalities. The solution covers the Port of Djibouti/Doraleh multi-purpose, Société de Gestion du terminal à Conteneur de Doraleh (SGTD), formerly Doraleh Container Terminal (DCT), the Port of Tadjourah, and Horizon terminal (liquid-bulk). It does not connect to any airport or land border ports. It does, however, include MSW functionalities. It has expanded to include exports, as well as imports, both for MSW and PCS functions.²² For MSW functionalities, export was included later and became operational in 2019. For the PCS functionalities, export was implemented with some amendments requested by shipping agents who preferred auto-approval functionalities to reduce operational requirements on their side. This enabled port fees invoicing for export functionalities to be included and used.

In addition, the governance structure of the system in Djibouti is agile. The benefits include continuous improvement in the efforts of operator. There is no established or formal regulation concerning what the scope of the project should be. DPCS instead works directly with stakeholders to digitalize their services. This process requires integration with the stakeholders' systems or the implementation of new modules. In both cases, approval and

collaboration of the stakeholders is required. As highlighted in the case study, stakeholders may request new services as needed.

The impact of the DPCS has generally been positive and KPIs are in place to monitor this. A particularly interesting example of this is the improvements seen with respect to Harbor Master functions and operations.

Project preparation and development

As already noted in the introduction, the initiative that developed the DPCS began in 2017 was top-down and involved a decision issued by the President of Djibouti. Through this initiative the Port Authority was put in charge of the project. This then began a tender process where PCS solution providers were identified and selected. At the time, CrimsonLogic was chosen due to the breadth of functionality offered and the pricing of the solution. Furthermore, the full ownership of the platform was a critical factor in the decision and favorable terms were only at the time offered by this company. Following a successful tender process, a new company, DPCS, was created to work with the PCS solution provider on the implementation of the DPCS System. The transfer of knowledge is part of the contract and is covered to enable the DPCS system operator to operate, maintain, and further develop the solution.

The Djibouti Ports and Free Zones Authority took the leadership role in the design and implementation of the solution. By doing so it created the DPCS company to collaborate with stakeholders to implement the solution.

Once the initial core of the system was developed, the government of Djibouti acquired a perpetual ownership license with access to the source code. This meant taking over the full intellectual property ownership of whatever was developed since it acquired the solution.

The development of the DPCS was planned to follow three key consecutive stages, including:

- Phase 1: Maritime Single Window (MSW) modules.
- Phase 2: Port Community System (PCS) modules.
- Phase 3: Other Governmental Organizations (OGA) and Business Intelligence.

As of the writing of this case study, the system has been developed, and integration with Asycuda has been achieved. In addition, shipping agencies, ports and free zones, and freight forwarders, are connected and use the DPCS through the system

²² Stakeholders did not use the PCS for export services until December 2022 (see attached DPCS statistics). However, shipping lines or agents use the MSW for electronic information exchange upon arrival, stay, and departure of vessels in Djibouti's ports (and thus export and import).



PHOTO BY: © PCS OPERATOR | DPCS DJIBOUTI

interface. The respective systems used by terminal operators have also been connected through EDI, allowing for interoperability between systems. Five banks have also been connected for online payment.

Moving towards the complete implementation of the solution and continuous improvement of the platform, DPCS plans to digitalize stakeholders' services as needed. The services provided either involve the integration of the systems being used by stakeholders with DPCS, or the implementation of new modules. In both cases, approval and collaboration of the stakeholder is required and each implementation will go through the typical process of 1) A gap analysis. 2) A design phase. 3) A development and build phase. 4) User acceptance and training, before going live.

It has been the case that stakeholders also request new services that are not in the original scope of DPCS. For example, Société de Gestion du Terminal à conteneurs de Doraleh (SGTD) port was able to suggest making the request related to the electronic delivery order (E-DO) module electronic and available through the DPCS. Freight forwarders can use this to request the delivery order online. While the E-DO module was already available through DPCS, the request was earlier made physically.

Another example is that free-zone companies/operators requested digitalized administrative services, like company registration, visa requests, free-zone gate-passes. These have been made available by DPCS. In such cases, implementation is subject to priorities and capacity. There is no requirement on the solution provider to go beyond the general scope of the project plan.

Governance and business model

The DPCS is a publicly owned company set up as a special purposes vehicle (SPV) owned by Great Horn Investment Holding (GHIH), a public investment holding owned by the Djibouti Ports and free zones authority (60%), and the Djibouti Sovereign Fund (40%).²³

The platform so far has been implemented through regulation and directives from the port and free zones authority in collaboration with other regulatory entities. Memorandum of Understandings (MOU) were signed with the most notable being:

- MoU between the Djibouti Ministry of Infrastructure & Equipment and the Ethiopian Ministry of Transport and logistics on cross-border data exchange.

²³ Since June 2020, from the reserves built up, in addition to the returns from the portfolio of future projects and the optimization of the assets transferred to the fund, 40% of the shares held by the State in Great Horn Investment Holding (GHIH) were transferred to the sovereign wealth fund, FSD. The latter becomes a new shareholder of GHIH with a 40% stake.

- It involved integrating DPCS platform with the Ethiopian logistics systems to exchange real-time information on transit cargo transportation.
- Partnership agreement with the Directorate of Vocational Training of the Ministry of National Education and Vocational training.
 - Introduction of a practical vocational course based on the DPCS platform for the vocational college students in logistics before they join the workforce.
 - The role of DPCS was to train the vocational college teachers and set up a clone of the DPCS platform for student training.
- Partnership agreement with the National Office for Statistics.
 - DPCS to provide access to its business intelligence module for the National Office for Statistics staff.
- Partnership agreement with the Association for the Development of Port, Logistics and Transport Professions.
 - Provision of continual DPCS training for the ports and logistics staff.
- In addition, DPCS has SLAs and user agreements in place for all its users.

Public and private sector entities are involved in the governance of DPCS through the board of directors. The DPCS Board is made up of the following:²⁴

- DPFZA Chairman.
- Representative from the Ministry of Transport Infrastructure.
- Representative from the Ministry of Digital Economy and Innovation.
- CEO of Djibouti Sovereign Fund.
- CEO of Djibouti Ports Corridor Roads (Corridor Road Agency).
- Chairman of shipping agents' associations.
- Chairman of forwarders' associations.

A port community meeting is held every three months between all port community stakeholders, including Customs. During these meetings, bottlenecks are identified and discussed, and those requirements are submitted. A working group is set up to follow each module.

Port operators are represented by Djibouti Ports free zones authority in the DPCS Board of directors. Furthermore, the Djibouti Sovereign Fund is also included. These two entities make up the general assembly of shareholders in all the ports. This is particularly relevant for discussions and decisions related to pricing (i.e., user fees and shareholders' budget contribution, the selection of PCS developers).

The set-up is flexible, allowing for an agile work flow. This is enabled by the fact that DPCS has a contract with all users and integrated parties. Each party in the contract has responsibilities and liabilities where the agreement is breached. This allows DPCS to implement new modules or services without needing the unanimous approval of all the stakeholders on the board.

Financing and pricing model

The cost of the DPCS is estimated to have been approximately USD 5 million. One million of this was in the form of shareholder investments and the rest covered by debt financing. Currently, operation costs are subsidized until DPCS can recover all its costs from the platform users.

The fees and charges are first set by the Board of Directors and then negotiated with user groups. Fees do not necessarily cover implementation costs in all cases. As a result, the DPCS prioritizes which module is to be implemented based on the value to the port and logistics community regarding cost or time reduction.

Tasks that are regulated to be performed by DPCS (mandatory) are normally free of charge. That said, optional services are charged for at a pre-negotiated fee. For any functionalities to be chargeable, they must first demonstrate a value added to customers' logistics operations. Then the benefitting party will be asked to pay an agreed upon fee.

Applicable fees include back-end integration and licensing fees covering external system integration, which are paid annually. There are also annual connection fees for shipping agents and free-zone companies.

Functional and technical architecture

The functional architecture of the system includes three main areas of activities, namely OGAs, Customs, and hinterland transportation. The integration with stakeholders that are connected to the system takes place through secure application programming interfaces (APIs). The scope of implementation for each service is depicted in the following table. As shown below, business intelligence and track and tracing are included in the scope.

²⁴ The designation of the Board of Directors members was updated at the last General Assembly on January 25, 2023

Table 2. Scope DPCS

S/N	Djibouti Port Community Systems - Terminal Operator Services	Status
ARRIVAL REPORT MODULE		
1	Impending Arrival Report (IAR)	Completed
VESSEL MANAGEMENT		
2	Vessel registration	Completed
3	Vessel service route	Completed
4	Vessel schedule	Completed
VESSEL ARRIVAL/DEPARTURE MANAGEMENT		
5	Berth Application	Completed
6	Vessel operation invoicing (marine charges, stevedoring)	Completed
7	Vessel operation request (Piloting, Mooring, shifting...etc)	Completed
8	Dangerous goods déclarations	Completed
9	Crew List	Completed
10	Passenger List	Completed
11	Health declaration data	Completed
12	Hydro Carbon Declaration	Completed
13	Security Declaration	Completed
14	Vessel movement data (anchorage,piloting,shifting etc...)	Completed
15	E-Port clearance	Completed
MANIFEST MODULE		
17	E-Manifest	Completed
18	Co-loader Manifest	Completed
19	Manifest Amendments	Completed
20	Manifest integration with ASYCUDA World (Djibouti Customs)	Completed
21	Custom Waybill Print	Completed
CARGO MANAGEMENT		
22	Electronic Bayplan module	Completed
23	Loading / unloading list	Completed
24	Nomination of second carrier	Completed
25	Electronic Delivery Order Module	Completed
26	Online Port Fees Request Module	Completed
27	Transport Order (Merchant Haulage Mode)	Completed
28	Booking of Delivery / Receiving time slot	Completed
29	Pre- Gate details/print	Completed
30	Equipment interchange Print	Completed

S/N	Djibouti Port Community Systems - Terminal Operator Services	Status
ARRIVAL REPORT MODULE		
31	Freight booking	Completed
32	Freight booking Confirmation	Completed
33	Container booking confirmation	Completed
34	Delivery of nominated container	Completed
35	Shipping Note	Completed
36	Transport Instruction	Completed
37	Packing List	Completed
38	Container storing order	Completed
39	Release Order	Completed
40	Container Delivery / Receiving Gate Schedule	Completed
41	Customs declaration submission	Pending
42	Integration with ASYCUDA for container release	Pending
CORRIDOR SERVICES		
43	Corridor permit request/print	Completed
	Free Zones Administrative services	
44	FZ company registration	Completed
45	CNSS Application (Social security)	Completed
46	Visa request	Completed
47	Residency request	Completed
48	Work Permit request	Completed
49	Exoneration request	Completed
50	Administrative invoices	Completed
51	Renewal of license	Completed
52	FZ gate-pass	Completed
BUSINESS INTELLIGENCE & REPORTING		
53	Business Intelligence Module (Dashboards, data visualisation, reports)	Completed
track & trace		
54	Vessel Tracking	Completed
55	Gate-in gate-out tracking	Completed
56	Truck tracking corridor	Completed
57	Train voyage Tracking	Pending
58	Invoice verification	Completed
59	Container Tracking Full Details	Completed
60	Manifest operation tracking (documentation tracking)	Completed

Benefits and impact

The perception of stakeholders regarding the impact of the PCS in Djibouti is reportedly positive. For most users, DPCS facilitates the process of sharing the necessary information between traders and authorities. It improves transparency in business, increases efficiencies of business (processes, transport), and minimizes trade transaction costs and time.

A particularly good example of the impact is the way in which performance has improved for the office of the Harbor Master. Before implementation the office lacked an information system. Everything was done manually and communicated by email. After the implementation of the system, operations are better integrated with one another, improving performance. The billing system is also now connected with customers, allowing easier billing. The office also achieved a digitized process with faster response times.

In addition to perception-based evaluations, the DPCS has developed key performance indicators (KPI) to evaluate and monitor its performance. Examples of such KPIs include the average response time of responses by public sector entities and Harbor Master services.

While the benefits of implementing the system have generally been recognized by stakeholders, challenges to full implementation by some stakeholders remain. In some cases, for example Customs, resistance to change applies. There has been a tendency not to prefer electronic documents over paper since it appears to reduce autonomy over decision making by officers.

In addition, charging fees for some functionalities represents a barrier to uptake. Using online payment functions, for example, are not free. Shipping agents have expressed interest in using the service but only if it is free or available at a low cost (currently reduced from USD 5 to USD 1).

Key takeaways

The system implemented in Djibouti includes the functionalities of a PCS and an MSW. Uptake has been high, and the system is used by most ports and freeports in the country. All operational ports (DMP/PDSA, SGTD and Tadjourah Port) and most free zones (DFZ, EAH, UKAB) are integrated.

The way in which the project and PCSO are structured and governed allows for flexibility and continuous improvement. Red tape is eliminated or at least minimized by not pinning down the specific scope of the solution and instead allowing stakeholders to provide feedback and input about their requirements and request new functionalities.

The impact of the DPCS has generally been positive and KPIs are in place to monitor this going forward. A particularly interesting example of this is the improvements seen with respect to Harbor Master functions and operations. Customs, however, has not completely endorsed the digitalization initiative and work still needs to be done here.