

# How to successfully launch a green field operator in 10 months

By Annie Turner

**Who:** DITO Telecommunity and Whale Cloud

**What:** Creating a community around a world-class service, based on a high-quality network and differentiated customer experience

**How:** Leveraging cloud native IT and network architecture – drawing on TM Forum’s established frameworks, best practices and Open APIs – to enable successful launch within 10 months

**Results:**

- Three core network centers deployed in five months
- More than 5,000 base stations and a fiber network of more than 21,000km covering 52.75% of the Philippines deployed before the commercial launch
- More than 99% of customers’ trouble tickets closed within 24 hours
- 300% shortening of handling cycle for customers’ issues
- More than 5,000 APIs expose capabilities to third parties
- Attracting 20,000 new customers per day on average since the commercial launch
- 6,000 customers act as mini-dealers, creating deals for DITO within a month of launch

DITO Telecommunity (DITO) in the Philippines wanted to build a cloud native communications service provider (CSP) from the ground up. DITO’s strategy is to build a community, based on outstanding service due to the high-quality network and differentiated customer experience. Building a green field, cloud native CSP is still new territory, so DITO faced some big challenges.

First, planning and designing a cloud native architecture for a CSP is one the toughest challenges in telecoms because the telecoms business is different from that of other digital-native companies. Then there is the challenge of managing multiple vendors on the cloud, in both the IT and network domains: Each vendor brings its own technology stack, adding to the complexity of operations and management.

A hallmark of digital companies is that they are data-driven, so DITO needed to avoid creating IT silos to unlock the full potential of the cloud platform and enable vendors to collaborate and innovate in a single environment. A consolidated telco-scale data management platform was needed to process data effectively and securely, and support business optimization and decision-making.

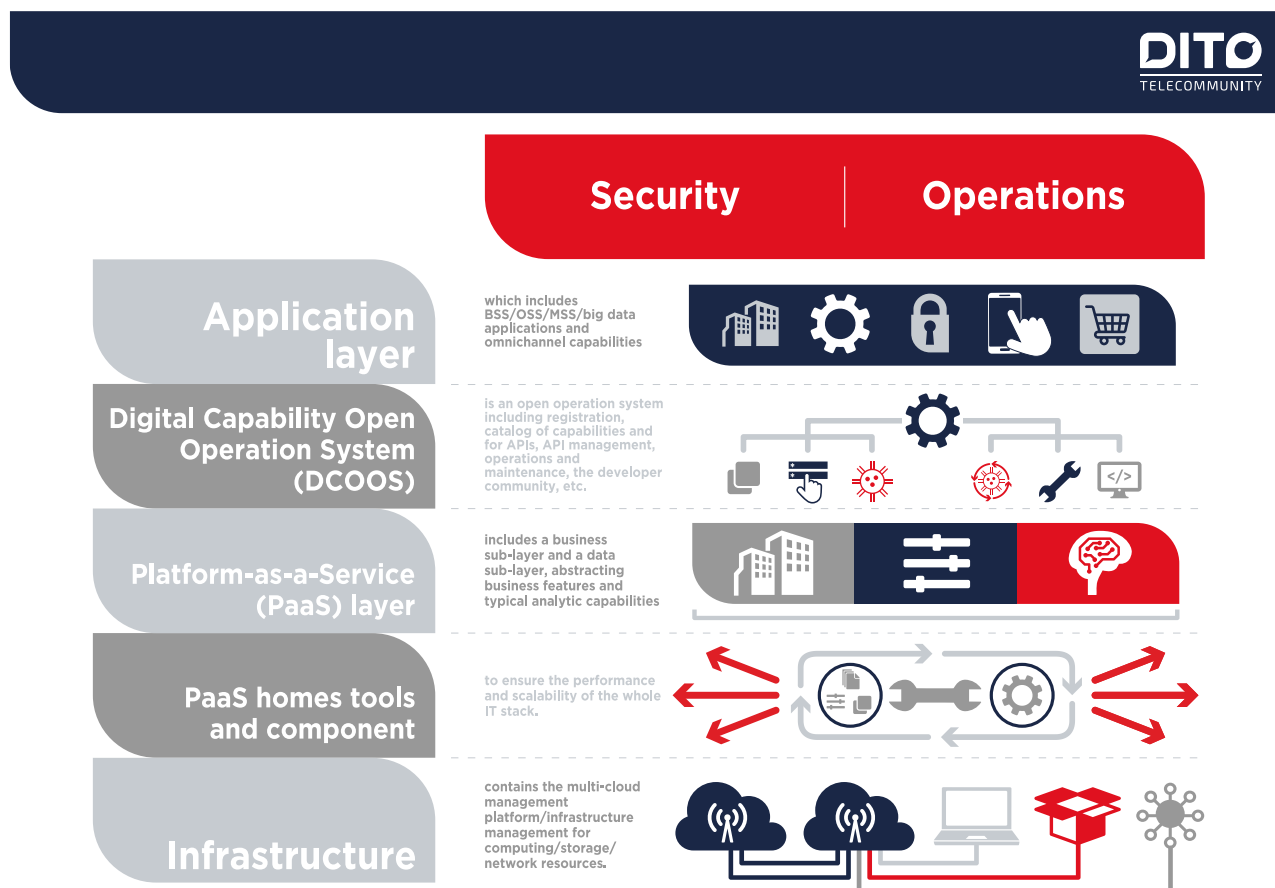
## Speed is key

Despite these challenges, speed of execution was key in this project, hence DITO and Whale Cloud used a range of TM Forum assets for this fast, ambitious, innovative deployment. For example, the [Business Process, Information](#) and [Application](#) Frameworks (eTOM, SID and TAM) were used to support rapid deployment of business processes, to create IT models and to master data specifications.

The Forum’s [Open APIs](#) ensured that the many integrations were both smooth and fast, and that vendors spoke the same language which also helps to avoid custom interdependencies in the future.

## Models and architecture

Whale Cloud and DITO Telecommunity designed a platform and application model and defined a five-layer, cloud native architecture to run it on, as shown in the graphic below.



To fully utilize the scalability of a cloud native platform, Whale Cloud deployed the business support, operating support systems (BSS/OSS) and big data on the cloud. The mobile app, point of sale, staff portal, TV portal and gateway for external capabilities, and all the customer and partner channels are also cloud-based. This enables consistent and personalized customer experience in real time as channels and business applications are decoupled.

The DCOOS application layer was built on a microservices-based architecture in which each microservice is a separate entity, loosely coupled to atomic services that can upgrade independently and accelerate iteration.

The unified technical PaaS layer aligns hardware standards and network virtualization technology, and one technical solution overrides different vendors' silos.

“Whale Cloud is so pleased to work with DITO Telecommunity on this wonderful transformation journey, to help win over customers and the market with cloud native IT and reliable networks that deliver strong market enablement capabilities, good customer perception, and efficient and intelligent operations,” said Steven Cho, Chief Digital Officer, Whale Cloud

From day one, the business and data centers formed a closed loop to automate data operations. The enterprise-level data center can provide data services through model, index and tag libraries. It can also expose big data capabilities to third parties, including data applications, APIs, report tools, data-mining tools and more.

### **Converged capabilities**

The business center has converged IT and communications business capabilities, based on unified standards. The capabilities can be re-used by external parties to form new digital services. A closed-loop mechanism means that the massive amounts of data produced by the business center pours into the data center where it is analyzed. The intelligence generated by the analysis is infused into the business system to perpetuate a cycle of constant improvement.

A set of “future-ready” tools has been deployed to handle the complex, distributed nature of microservices architecture. DITO has a single intelligent operation platform with an end-to-end DevOps pipeline for continuous integration, continuous deployment and continuous testing (CI/CD/CT). Since the commercial launch, Whale Cloud has collected customer feedback from the channel mobile app, while different departments operate in cross-functions scrums and the one-click upgrade tool guarantees the stability and agility of iterations to continuously optimize the performance of the customer channels.

## DITO's successful launch

The Forum's Business Process, Information and Application Frameworks (eTOM, SID and TAM) were used and supported by Open APIs.



**3** core network centers deployed in **5** months with more than **5,000** base stations and a fiber network of more than **21,000km** covering **52.75%** of the Philippines



attracting **20,000** new customers per day



more than **99%** of customers' trouble tickets closed within **24 hours**



**300%** shortening of handling cycle for customers' issues



**6,000** new customers creating deals for DITO within 1 month of launch



Design and network planning **100%** online, involved more than **30** professional networks,

and more than **60,000** network elements and **3 million** pieces of resource instance data.



more than **5,000** APIs expose capabilities to 3rd parties

**DITO**  
TELECOMMUNITY

The design and network planning were 100% online, with global network resources managed from end to end, making the network construction collaborative and traceable. It involved more than 30 professional networks, and more than 60,000 network elements and 3 million pieces of resource instance data.

## Building infrastructure

The network department constructed three core network centers in five months. What's more, over 5,000 base stations and a fiber network of more than 21,000km long which covers 52.75% of the Philippines were deployed before the commercial launch.

"As a new player in this aggressive telco market, DITO Telecommunity aims to reinvent the Philippine telecommunications industry by improving the way Filipinos experience connectivity with secure, fast and high value 4G and 5G technologies. To do so, we need to ensure that everything is digital from the front to the back," said Albert Jiang, IT Director of DITO Telecommunity.

"With a robust IT architecture, a unified management system and digital customer engagement channels, we are able to meet the business demand for launching multiple innovative services with greater agility and faster time to market, and realize full lifecycle and coordinated management of the network and the cloud resources."

## Agent model

DITO invented a unique agent model, turning customers into mini-dealers: Customers can apply to become mini-dealers, conducting transactions on behalf of DITO, for which they are rewarded with commission in real-time. All these activities are conducted online, within a mobile agent app. In the first month after the launch, about 6,000 mini-dealers were onboarded, which is expected to expand to more than 1 million within a year.

The customer experience is constantly optimized and new innovations added by collecting data about users' behavior and applying data analytics, and more than 5,000 APIs are exposed through backend capabilities. The customer experience-related innovations are updated at three times a week to gain differentiated competitive advantages.

Another aspect of this constant optimization is to solve any customer complaints quickly. With big data and AI, the capabilities from every microservices center were organized by process orchestration to help customers self-diagnose their problems. Statistics were displayed to customers, agents and technicians through computer visualized via the web or an app.

Agents and technicians can perform one-click diagnosis and one-click troubleshooting to improve the customer satisfaction rate. This means that more than 99% of trouble tickets were closed within 24 hours and the handling cycle of customer complaints was shortened by 300%.

## Cross-function

DITO simplified the delivery journey and reduced delivery time by building an end-to-end digital delivery process that crosses marketing, development and operations.

The delivery time of a full-stack digital transformation project was shortened from the usual two to three years down to 10 months, achieved in part by using automated delivery tools and DevOps methodology. This speeded up version iteration by a factor of 30. During the challenging conditions of the pandemic in 2020, the formerly on-site user acceptance testing and cutover was executed remotely after DITO developed best practice for remote delivery that balanced cost, efficiency and safety.

The guidance and support of TM Forum assets enabled DITO to refine the business processes and ensure the agility of cloud native IT and network. The successful launch of the DITO program will usher in a new era for telecoms in the Philippines.