INTRODUCING
SHELL CONNECTED CAR API

Contents

Our Vision

Over the last 50 years, Shell has continually brought innovation into fuels, and we are excited to bring this further into the digital era with the Connected Car programme. In today's fast-paced world, where the world's information is available at our fingertips, our customers' main struggle is the waiting time at service stations. Shell intends to revolutionise the payment system by providing a simple, efficient, and more convenient service - a digital drive through.

Refuelling can be stressful, and Shell is committed to improving the customer experience by initiating the Connected Car programme. We plan to move more of our services onto digital channels to give our customers the ability to order products and services prior to arrival. The refuelling stop serves as an opportunity to have these orders delivered directly to the vehicle.

Shell has put in a great deal of research into the Connected Car space, and found that this is a major step into the Internet of Things (IoT). We aim to provide support and tools for third party developers to create their own products for vehicles within the Connected Car technology, via the use of the Shell Application Programming Interfaces (APIs).

Why should I use the Shell CC API?

Shell is one of the world's biggest retailers and a global logistical service provider with over 40,000 service stations in more than 70 countries and territories. Shell's distinctive red and yellow pecten emblem is also one of the most recognised and trusted trademarks.

Shell uses advanced technologies and takes an innovative approach to help build a sustainable energy future. Starting with key strategic markets, our research and development into the connected car solution will help bridge the gap between electric, shared, and autonomous vehicles, which will play an increasingly larger role in people's methods of transport.

CIRCA **43**K
SHELL BRANDED SITES

500K
FRONT-LINE COLLEAGUES

MORE THAN **70**
COUNTRIES

AROUND THE WORLD
25 MILLION +
CUSTOMERS SERVED DAILY

Key Services

STATION LOCATOR

The Station Locator API will be designed to allow customers to connect with Shell's global site database in the cloud in order to pull information regarding site amenities, prices and facilities.
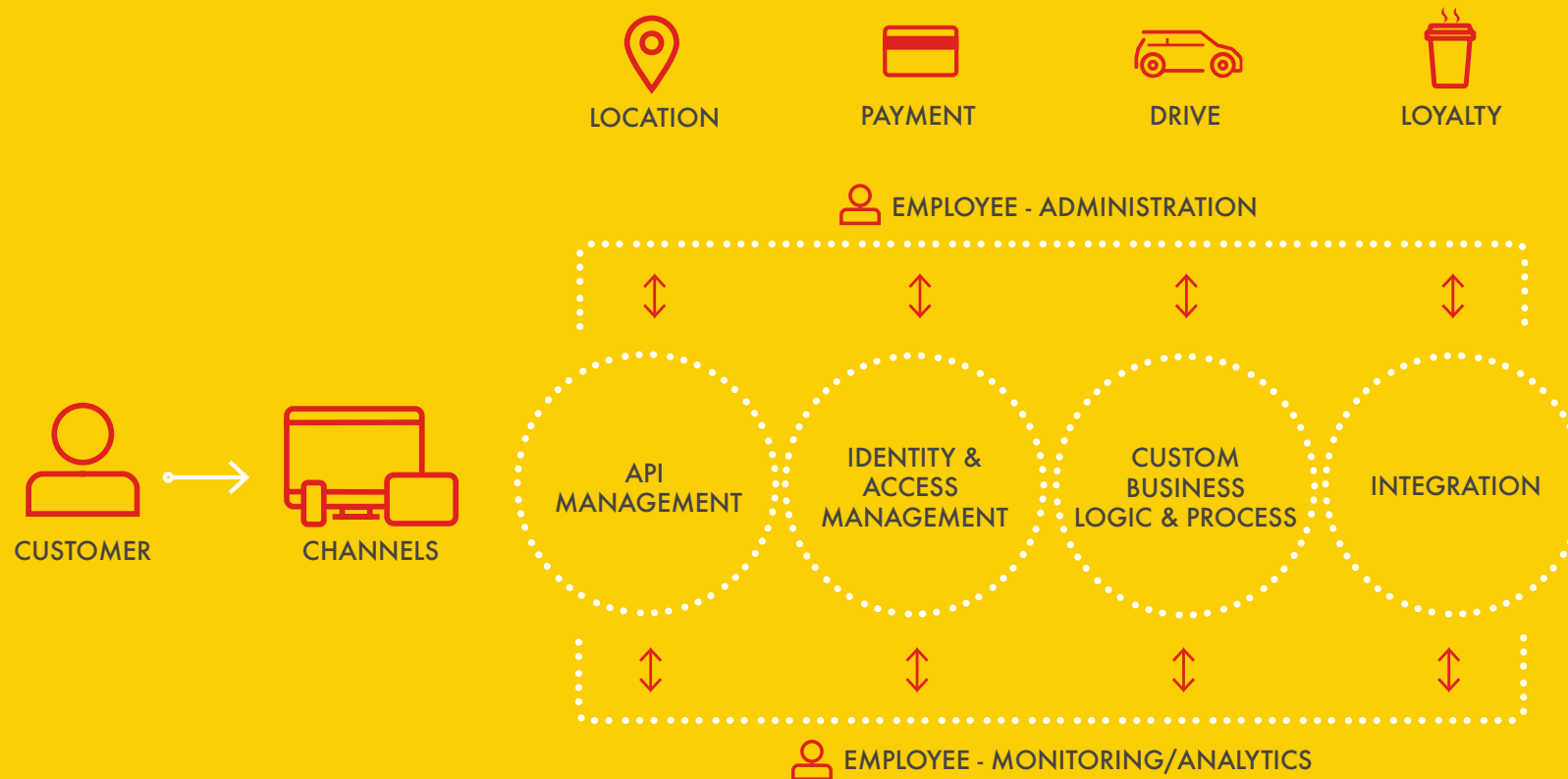
SHELL DRIVE

For fuel efficiency and fuel economy seekers, who are looking to maximise their mileage for the fuel and money used, the Shell Drive API is designed to be a mobile driving companion that brings together Shell's fuel expertise with the driver's passion for motoring.

FILL UP & GO

We know people lead very busy lives. Sometimes our customers don't need coffee, milk, or groceries from our shop. Sometimes they just want to fill up and go. The Fill Up & Go API will be designed to allow access to our speedy mobile fuel payment service.

LOYALTY

The Loyalty API aims to provide access to our holistic loyalty programme that will reward behavioural and transactional interactions across both fuel and non-fuel retail. Our service is innovative, evolving, flexible but most importantly, rewarding for our loyalty members.

Shell Connected Car Services

LOCATION   PAYMENT   DRIVE   LOYALTY

EMPLOYEE - ADMINISTRATION

CUSTOMER → CHANNELS

API MANAGEMENT   IDENTITY & ACCESS MANAGEMENT   CUSTOM BUSINESS LOGIC & PROCESS   INTEGRATION

EMPLOYEE - MONITORING/ANALYTICS

Security: The Shell APIs aims to implement the best practices and technologies in order to provide adequate levels of protection.

Performance: A scalable infrastructure combined with a well-designed architecture is the key to delivering user-friendly experiences performance-wise. The Shell APIs would aim to use a PaaS (Platform as a Service) with high availability capabilities, to efficiently deliver content all over the world.

Omnichannel: To enable agility on the client's side, Shell APIs aim to build on a layered architecture, designed to deliver the high quality of data in order to enable all kinds of channels to consume information.

Mission Control: The administration of the whole system must be done in an easy way. Therefore, a web portal comes in handy, and thanks to an admin panel it is possible to master the system and monitor the most important KPIs.

Station Locator

The Station Locator API is designed to allow a connection to Shell's global site database in the cloud in order to pull information regarding site amenities, prices, and facilities. The Station Locator API will enable the display of Shell site data on a customer's in car navigation and gives the posibility for drivers to search across the Shell site database for specific amenities. Combining the Station Locator API with vehicle management data could allow the customer to display Shell site data when they are low on fuel, and a Shell site is coming in range. This enables the customer to find the nearest Shell Station, tailor their search to look for specific services and amenities, or compare fuel prices across Shell sites.

Station Locator

USER JOURNEY

Fiona is a *quality believer* but has no relationship with Shell. She purchased a new car last year that provides the comfort to commute long distances for work. She has no particular attachment to any fuel retailer.

1. Fiona is a great fan of the Connected Car features that are embedded inside her vehicle. The following morning, upon entering the car for the daily commute she is notified that new features have been added to her vehicle including Shell site recommendations.

2. Fiona then enters her destination into the navigation software and is notified that she will need to refuel. She is presented with various Shell site options for her route. She chooses the route suggested as the most efficient by her in-car navigation system.

3. Fiona starts her journey following the directions of the navigation system, and then realises that she promised a colleague that she'd give her a lift to the office.

4. As Fiona decides to take a left instead of right, the Connected Car head unit provides an updated suggestion for the nearest Shell station based on her fuel management status. After picking up her friend, Fiona decides to pull into the nearest recommended Shell station.

5. Fiona exits the car and fills up her tank with 35 litres of fuel.

6. Once she completed refuelling and returned the pump to its holster, she receives updated route information on her Connected Car head unit with the remaining journey time and route to the office.

FIONA

JOURNEY PLAN

ON THE ROAD

ADD STATION TO ROUTE

WELCOME TO SHELL

FILL UP

Shell Drive

For fuel efficiency and fuel economy seekers, who are looking to maximise their mileage for the fuel and money used, the Shell Drive API will be designed to be a mobile driving companion that brings together Shell's fuel expertise with the driver's passion for motoring. Shell Drive aims to drive digital engagement beyond the forecourt by introducing a driving companion that embodies Shell's brand identity and offers the services that drivers expect. The Shell Drive API will record and analyse trips, allowing motorists to track and monitor how their driving behaviour contributes to fuel consumption. Through the use of gamification, motorists can opt-in to compare their performance with other Shell Drivers, collect points and participate in challenges with a chance to win great prizes.

Shell Drive

USER JOURNEY

Stacey is a *quality believer.* She is very proud of her car and is keen that it projects a good image of herself.

1. Stacey leaves home in her car having already downloaded the Shell Motorist app. Upon entering the car, the app recognises the Connected Car head unit and is ready to analyse her journey by using Shell Drive.

2. Stacey then enters her car and is notified that she just dropped 10 ranks in her friends' leaderboard, ranked on efficiency percentages. Stacey is currently scoring an 80% efficiency rating, and she needs 15% in order to regain the number one position on the leaderboard.

3. Stacey decides to activate her journey analysis so that she can gain a better efficiency percentage in order to grab that number one position.
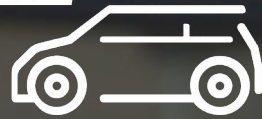
4. As Stacey arrives at her work, she quickly checks the journey details and notices that the friends' leaderboard has been updated. Stacey has moved up 5 places in the leaderboard due to a very efficient journey. The number one position is now in range.

STACEY

LEADERBOARD

1
2
3

ON THE ROAD

START DRIVE

DESTINATION

RANKING UPDATE

5 ▲

Fill Up & Go

We know people lead very busy lives. Sometimes our customers don't need coffee, milk or groceries from our shop. Sometimes they just want to fill up and go. The Fill Up & Go API will be designed to allow customers to access our speedy mobile fuel payment service that quickly gets them back on the road. Powered by our payment partners, it is designed to let customers pay for fuel quickly and easily from their car. Once the customer accesses one of our retail sites, the Fill Up & Go service would start to authenticate the visit and would quickly allow seamless payment for the fuel. The Fill Up & Go API is connected to the Shell Mobile Payment platform, which would provide flexibility to add payment providers and CVP enablement in various markets.

Fill Up & Go

USER JOURNEY

Emmanuel is a *quality believer* and has recently purchased a new car. He is excited by its Connected Car functionalities and their potential to make his driving experiences easier. He has no prior relationship with Shell but is interested in their new technologies.

1. Emmanuel collects his new car from the dealership. The car is already preconfigured with his preferences through his OEM app, and notifies him that cashless payments can be made through the car using Shell's partner application.

2. Emmanuel downloads the mobile motorist application and is asked to create a Shell account that allows him to use the mobile payment functionality.

3. Upon departure from the dealership, Emmanuel notices that his fuel gauge has dipped below 25% prompting a notification on the Connected Car head unit that his fuel level is low and provides a map of the nearest Shell sites. He drives to a Shell site he has been to several times.

4. Having pulled up to the pump, Emmanuel confirms the Shell station pump and his payment details are pre-authorised. He then refuels with V-Power.

5. He re-enters the car and receives an electronic delivery note that provides detailed information on his latest transaction with Shell.
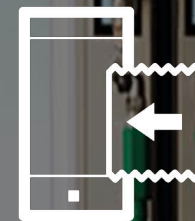
EMMANUEL

ON THE ROAD

PRE - AUTHORISATION

CHECK - IN

WELCOME TO SHELL

FILL UP

PAYMENT CONFIRMATION

Loyalty

The Loyalty API will provide access to our integrated loyalty programme that is designed to reward behavioural and transactional interactions across both fuel and non-fuel retail. It is innovative, evolving, flexible, but most importantly, rewarding for our loyalty members. It should grab their attention with some positive, unexpected surprises. Loyalty members should get the full experience whilst they're with us and walk away with an incentive to come back. Additional benefits of the Loyalty API will involve the display of real-time personalised rewards while checking in at Shell sites. The customer would be in total control of their available rewards whilst sitting in the car.

Loyalty

USER JOURNEY

John & Monica are a married couple who are *reward seekers*. They want to stick to the same refuelling brand between them so they can double up on their loyalty points.

1. Travelling back from a weekend away, Monica is notified on her Shell Mobile Motorist app that she has received a reward from Shell. She informs John and they use the in-car navigation system to drive to the next Shell site.

2. They pull into the Shell station to refuel and redeem the reward at the counter.

3. As they drive away from the station, their receipt shows the amount paid and that a free Car Wash reward has been unlocked with their latest transaction.

4. The following day, Monica logs in as the primary driver, begins her commute to work and wants to quickly clean the car before arriving at the office.

5. She pulls into the nearest Shell station and redeems her free Car Wash reward.

6. As Monica prepares to drive off, she receives her receipt from this transaction confirming that no cash has been charged on her credit card.

JOHN & MONICA

NEW REWARD

WELCOME TO SHELL

ON THE ROAD

CHECK - IN

REDEEM

FREE

Terms of use

Thank you for showing an interest in developing on the Shell platform. We are excited about this opportunity to help improve the refuelling experiences of our customers and are committed to enabling this for as many drivers as possible. In order to access our services, we will ask all interested parties to agree to a set of terms and conditions. These terms & conditions will be guided by the following principles:

1. Our customers are the number one priority of Shell. We need to work together to give them a frictionless digital refuelling experience. It is also fundamental that we comply with the law and respect their data and privacy settings.

2. We collaborate and work hard to make sure that participants are able to benefit their users through the services we make available.

This respect manifests itself in what we do (and don't) deem as acceptable use of our APIs. The terms & conditions for use will be announced in the coming months. If you are interested in working together on the future of refuelling then please contact us.

GENERAL ENQUIRES

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PARTNERSHIPS

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